MA 1936

THE ARCHITECTURAL RECORD

1936

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(Sears, Roebuck & Co., Grocery Bldg.)

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24 YEARS old at Kansas City, Mo.
(Kansas City Star)

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THE

ARCHITECTURAL RECORD

VOLUME 79 NUMBER 3 MARCH, 1936

RESIDENCE OF A. W. BROWN, SCARSDALE, NEW YORK. Verna Cook Salomonsky, Architect. Photograph by Harold Haliday Costain — **Frontispiece**

EXHIBITION OF THE ARCHITECTURAL LEAGUE OF NEW YORK, FEBRUARY 18 TO 29. By Edgar I. Williams — **173–176**

PORTFOLIO OF SPECIAL BUILDING TYPES

Railroad Station, Valley Stream, Long Island—Edgar I. Williams, Architect • Universal House, London, England—Joseph Emberton, Architect • Unity House, Forest Park, Pennsylvania—William Lescaze, Architect • Hall of Records, Annapolis, Maryland—Laurence H. Fowler, Architect • Tennis Shelter Built for Sherman Pratt—John Walter Wood, Architect • Market Street Station, Newark, New Jersey—McKim, Mead and White, Architects—Boy Scout Theater Interior, Forest of Spala • Bathing Center and Week-End Resort at Ingierstrand, Oslo, Norway—Eyvind Moestue and Ole Lind Schistad, Architects • Doubleday Doran Bookshop, Chicago, Illinois—Designed by Morris Lapidus for Ross-Frankel, Inc. • Remodeled House of Mary Sachs, Harrisburg, Pennsylvania—Eleanor Lemaire, Interior Architect • Central Heating Plant, Washington, D. C.—United Engineers and Contractors, Architects and Engineers; Paul P. Cret, Consulting Architect • The Harris Building and Loan Building, Harrisburg, Pennsylvania—Edmund George Good, Jr., Architect • The Southeastern Optical Building, Richmond, Virginia—Lee, Ballou and Vandervoort, Inc., Architects • Café Larue, New York City—Scott and Teegen, Architects • Minneapolis Armory Building, Minneapolis, Minnesota—Major P. C. Bettenburg, Architect; Walter H. Wheeler, Consulting Architect and Engineer. — **177–229**

NEWS OF THE MONTH — **230–233**

"LUMAR," A NEW MARBLE PRODUCT CREATED BY SCIENTIFIC RESEARCH — **234–236**

TECHNICAL NEWS AND RESEARCH:

Materials, Parts, Systems
Structural Analysis
Air Conditioning
Control of Light
Control of Sound
Furnishings — **237–244**

SUBSIDIES FOR HOUSING. By Arthur C. Holden, Chairman, Technical Advisory Committee, Housing Section of Welfare Council of New York — **245, 246**

NEARBY OUTLOOK FOR PUBLIC AND INSTITUTIONAL BUILDING IMPROVES. By L. Seth Schnitman, Chief Statistician, F. W. Dodge Corporation — **18, 20 (adv.)**

MARKETING NEWS OF THE BUILDING INDUSTRY — **24, 26, 29 (adv.)**

REVIEWS OF CURRENT BOOKS — **11, 12 (adv.)**

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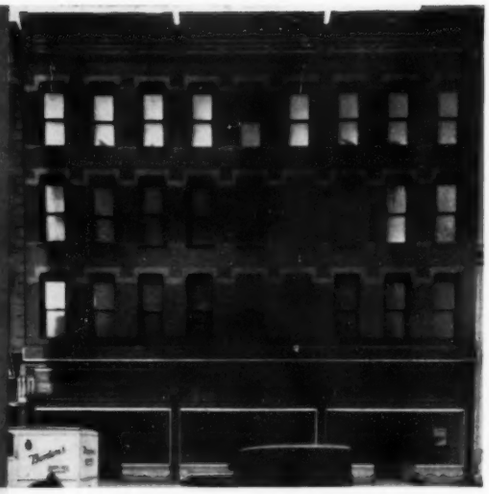
WHAT A DIFFERENCE A GOOD "Face-Lifting" MAKES!



Before modernizing. An old undesirable Sixth Avenue tenement.

After modernizing. Fine apartments and stores that rented rapidly. Architect for Studio Apartment Building, 1393 Sixth Avenue, New York City—William L. Rouse. General Contractor and agent, Klein & Jackson Construction Co., Inc. Plastering Contractor, Morell Plastering Co., Inc., all of New York City. Cream colored exterior stucco furnished by Artstone Rocor Corporation of Brooklyn.

● From an old Sixth Avenue tenement to fine, rentable, studio apartments and stores! That's what happened in this splendid modernization job.

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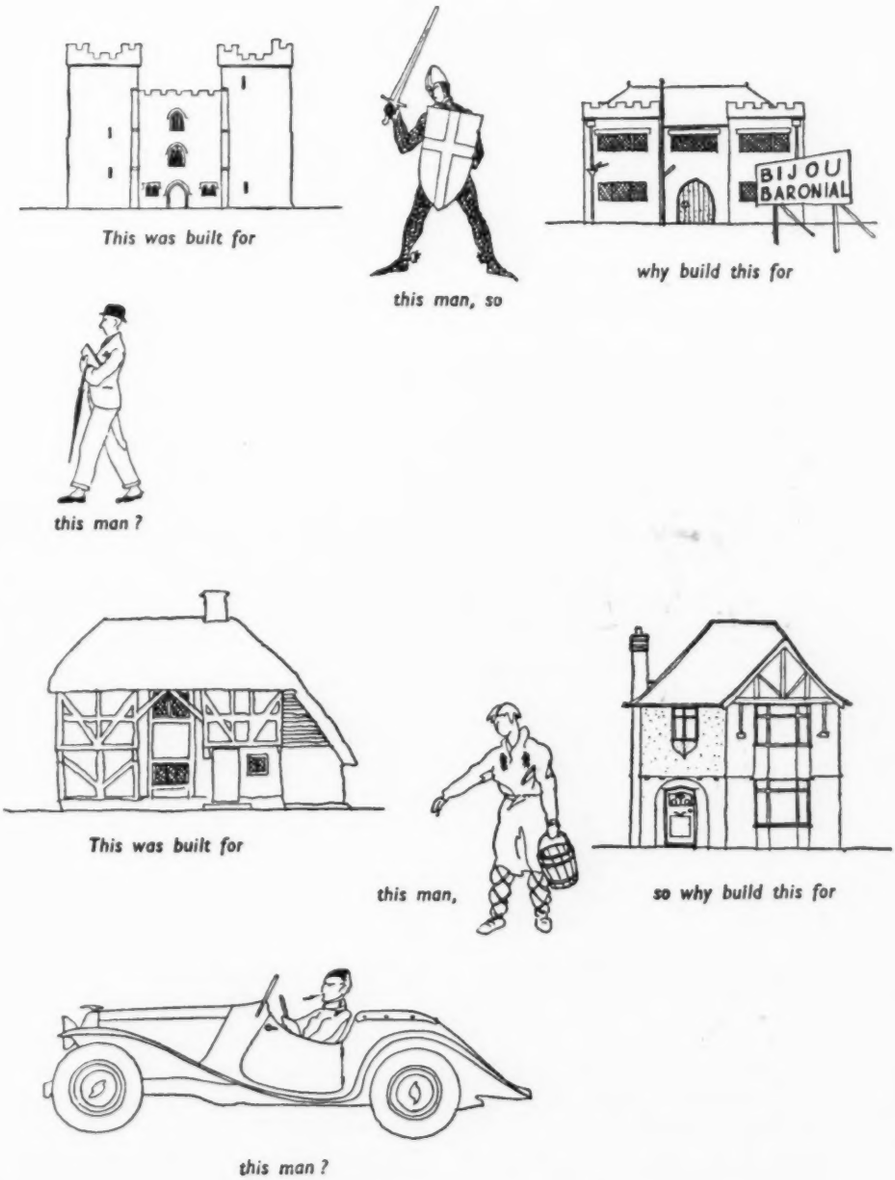
REVIEWS OF CURRENT BOOKS

THE HOUSE: *A Machine for Living In. By Anthony Bertram. A. & C. Black, Ltd., Soho Square, London.*

It is refreshing to find an approach such as this to a study of the house. In all the welter of discussion of housing in general, there is seldom any evidence of a proper perspective. That is, for most architects who build or write about the house there is generally no apprehension of its historical evolution. Here is a book which attempts to lay before the reader the problem of the modern house in relation to its historical sequence. To regard the house, or any form of architecture, as an isolated phenomenon is to arbitrarily set up a premise which precludes any solution of the modern problem. For the house, as the author so clearly points out, has been subject to the same evolution that has taken place in all social forms. To properly analyze the functions of the house it is necessary first to know precisely what these functions are and, second, to realize that these functions shift with the societies of which they are expressions. This book is of value not only because of its contents but because of this theory on which the contents are arranged.

"This," Mr. Bertram begins, "is a book for the layman—a popular book as it is called—but I will try to avoid making it a book for half-wits." He is as good as his word. Certainly



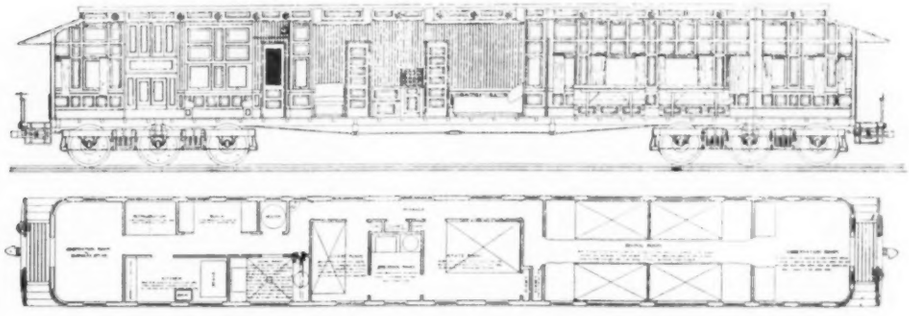
LITTLE MAN, WHAT NOW?
From *"The House: A Machine for Living In"* by Anthony Bertram

Mr. Bertram has evolved one of the clearest and freshest studies yet published. He calls this "A Summary of the Art and Science of Home Making considered Functionally"; he should have added, "considered historically." For this book, too, lays its major emphasis upon the fact that a house is not a static thing but a very live expression of the people it shelters. With a nice sense of malice and complete conviction he analyzes the shell, access to it, lighting and ventilating for it, and warming it. Then outlining the needs which it must satisfy, i.e., the need of food, of sleep, of recreation, of health, cleanliness and beauty, he shows what former generations of Englishmen have been able to achieve in these lines. He shows that, considering the state of the arts and sciences, they did remarkably well; but he militantly points out the absurdity of our copying their solution instead of evolving our own. All these former generations of Englishmen wanted substantially the same thing but their knowledge of their wants and their ability to fill them were limited by the times, the societies in which they lived.

Mr. Bertram's argument is pointed with excellent illustrations by A. G. Wise and while it is almost too well-written, with a touch of satire, it remains a well documented and excellently constructed piece of work. It is not a book for half-wits; nor should its use be confined to laymen. Any architect would do well to read it.

MY LIFE IN ARCHITECTURE. *By Ralph Adams Cram. Little, Brown and Company, Boston.*

THE ARCHITECTURE OF H. H. RICHARDSON AND HIS TIMES. *By Henry-Russell Hitchcock, Jr. The Museum of Modern Art, New York City.*



1884: H. H. RICHARDSON AS INDUSTRIAL DESIGNER
From "The Architecture of H. H. Richardson and His Time," by Henry-Russell Hitchock, Jr.

In curious contrast to the above is "My Life in Architecture" by Ralph Adams Cram. Beginning chronologically with the Boston of 1881, Mr. Cram takes us "with characteristic modesty" through the story of a professional career which has made him "the dean of American architecture." The book is so shot through with prejudice towards the modern movement that it is difficult to review it impartially. It is completely lacking in that long-range perspective which makes the two books above so valuable. For Mr. Cram lives in an animistic world. He has no perspective. Architecture to him is a static thing remote from evolution and unswayed by the fall of empire or any change in social criteria. "To continue with my thesis: the obvious inference was . . . for me to take up English Gothic where it was cut off during the reign of Henry the Eighth." If this is his concept of history, it is not difficult to understand his attitude toward modern art and architecture. For him these latter are but ugly expressions of the ugly modern age. They have no foundation in human experience because (he says) they are a scant 50 years old. This theme runs throughout his book. His long association with Bertram Goodhue is "an accident" he cannot explain. It was "chance" that took him to Venice and luck that brought him back. He is convinced that the so-called Renaissance of 1880-1890 sprang not from any wide social movement but purely from the individual efforts of men like Sullivan and Richardson. No breath of movement troubles Mr. Cram's Back Bay. No doubt can enter there, nor any concept of the vast up-surge of human history which finds its expression in changing architectural forms. "As the chief exponent of the Gothic" Mr. Cram does not merely turn the clock hands backward. He denies them any consecutive movement at all.

* * *

To find Mr. Henry-Russell Hitchcock, Jr., absorbed in the minutiae of Richardsonian architecture is surprising, to say the least. For he is the man who also did "Modern Architecture." However, he displays a detailed knowledge of the Victorian architecture of two continents which compels admiration. Indeed, this is not so much a story of H. H. Richardson as a too-detailed story of the architecture of his time. Mr. Richardson emerges from the study not with any impassioned concept of a new architecture but rather as a well-educated and versatile stylist. Although his work bears a superficial resemblance to the earlier work of Sullivan, it has nowhere the conception of architectural function such as Sullivan fought for over a period of half a century. Here, too, is a lack of perspective both in the author and in the subject; both are quite interested in the trees, neither can see the forest.

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and they all leaked!

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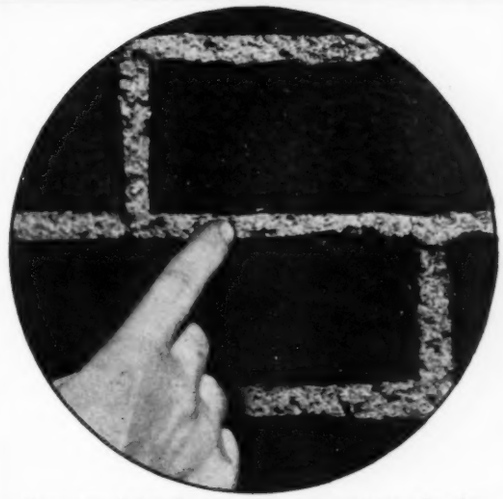
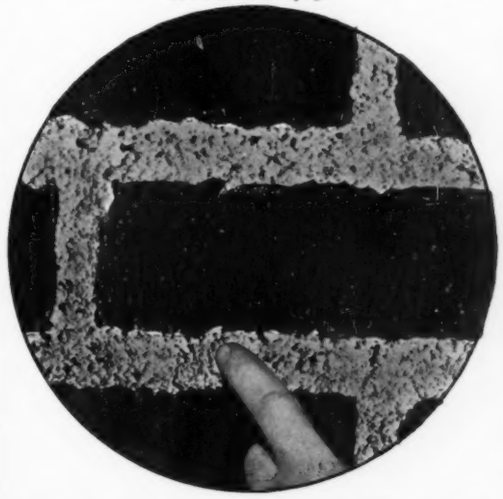
Omicron Mortarproofing was used throughout in the Amanda Stout Grade School, Reading, Pa. Contractor: Consolidated Engineering Co., Baltimore, Md. Architect: Associated Architects, Reading, Pa.



Above: Actual photo showing ordinary mortar joints—shrunken, cracked, permitting rapid water seepage and destruction.

Below: Actual photo showing how Omicron Mortarproofing preserves the bond between brick and mortar. No shrinkage—no cracks—no seepage.



A Few Outstanding 1935 Mortarproofing Applications: Wichita Falls Hospital, Wichita Falls, Texas • Western Electric Company, Baltimore, Md. • University of Georgia, Augusta, Ga. • Hiram Walker Distillery, Peoria, Ill. • Central Y. M. C. A., Toledo, Ohio

THE MASTER BUILDERS COMPANY

Cleveland, Ohio

CALENDAR OF EXHIBITIONS AND EVENTS

March 18-20	Exhibition of latest types non-ferrous metal windows. Sponsored by General Bronze Corporation at Hotel Biltmore, New York City.
April 1	Metropolitan Museum opens two Special Exhibitions. Work of John LaFarge; Work of Winslow Homer and Arthur Boyd.
April 1	Registration closes for Rotch Traveling Fellowship. Information: C. H. Blackall, Secretary, 31 West Street, Boston, Mass.
April 11	Closing date, preliminary drawings in Eighth Annual Bridge Design Competition, American Institute of Steel Construction, 200 Madison Avenue, New York City.
May 1	Closing date, Twelfth Annual Competition for Soap Sculpture. National Soap Sculptors Committee, 80 East 11th Street, New York City.
May 5-8	Annual Convention, American Institute of Architects, Williamsburg, Va.
June 6	Opening, Texas Centennial Central Exposition in Dallas, Texas.
June 27	Opening, Great Lakes Exposition, Cleveland, Ohio.

NEWS OF THE FIELD

GARDEN HOUSE
ESTATE OF E. E. BODGE
HONOLULU, HAWAII

Pan-Pacific Press Bureau Photo

George E. Yundt, architect and engineer, has opened a new office at 16 South Sixth Street, Allentown, Pa. Mr. Yundt was formerly at 16 E. Rock Road, Allentown, Pa.

Harry P. Sharpe, architect, is now practicing at 654 North Vermont Street, Los Angeles, California.

Carl J. Kastrup, architect, has opened offices at 7346 Madison Street, Forest Park, Illinois.

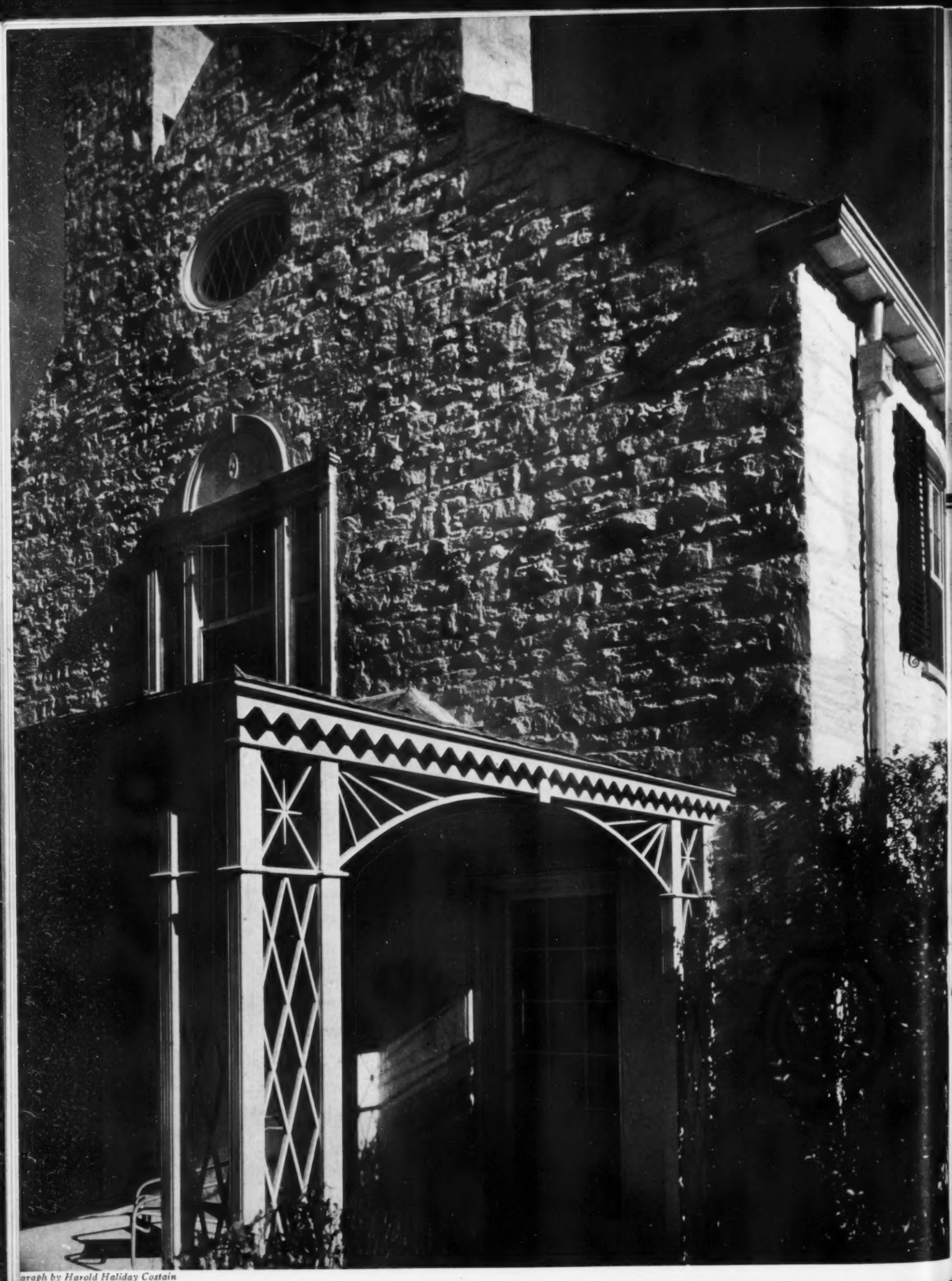
M. Louis Kroman and Isadore H. Braun, architects, announce the formation of a new firm, Kroman and Braun, at 180 North Michigan Avenue, Chicago, Illinois.

Sidney H. Kitzler, architect, has moved to 52 Willoughby Street, Brooklyn, New York.

The firm of Bowden and Russell, architects, has been dissolved. Phillips Russell will continue the practice of architecture at 420 Madison Avenue, New York City.

Charles Downing Lay, landscape architect, is now located at 515 Madison Avenue, New York City.

THE APRIL ISSUE • • • is devoted to real estate subdivision work, from the physical improvement of the acreage to the marketing of the finished house and plot. Normally about 80 per cent of the private houses constructed are produced by operative builders. From the revival in operative building which has already taken place, it is evident that the production of moderate-cost dwellings for sale will this year be an important factor in the building industry. As the new dwellings are for the most part being marketed with monthly-payment amortizing mortgages insured by the Federal Housing Administration, both the subdivision standards and the architectural standards set up for insurance have to be complied with. The new conditions of operative building have created a special field of service for architects. This service is described in the April issue by an architect who has taken the lead in developing it and who gives a list of his fees and commissions for the various elements of the service.



graph by Harold Haliday Costain

VOL. 79 NUMBER 3

1936

MARCH

THE

ARCHITECTURAL RECORD

EXHIBITION OF THE ARCHITECTURAL LEAGUE OF NEW YORK

FEBRUARY 18 TO 29

By Edgar I. Williams

In 1886 a group of architects initiated the first architectural exhibition in New York. This event was the starting point of the existing Architectural League, which is an organization of architects, painters, sculptors, landscape architects, and craftsmen.

Since 1886 an annual exhibition of architecture and the allied arts has become a traditional event of the League.

The exhibitions show current work done not only by League members but by practitioners from all parts of the United States and elsewhere. Some exhibitions have been of a distinctly international character. Attempts have been made at times to portray a trend of design by the selection of exhibits to tell a certain story. In one or two recent exhibitions the galleries themselves were arranged to create a harmonious and interesting spectacle and the exhibits were culled and so selected as to best fit into the composition of the galleries.

While an orderly arrangement of the galleries is essential, the presentation of the exhibits themselves was the principal objective of this year's show. An attempt has been made to separate the various branches of the arts in the interest of clarity, thus avoiding as much as possible the juxtaposition of features of violent difference in scale, such as a large piece of sculpture and an object of fine metal craftsmanship.

Collaboration of all the arts revolving about architecture being the base of the League's activity, an invitation was extended to the recently formed American Institute of Decora-

Photograph by Richard Garrison

OFFICE AND APARTMENT OF MORRIS B. SANDERS, NEW YORK CITY
MORRIS B. SANDERS, ARCHITECT

AWARDED SILVER MEDAL IN DOMESTIC ARCHITECTURE

tors to join with the League in this, the Fiftieth Exhibition. The South Gallery was put at the disposal of the Institute of Decorators. As a compliment to the League's half century of endeavor, one room of the period of 1886 and one illustrating the standard of design of 1936 were set up. The spaces surrounding these rooms were hung with photographs and drawings of work of the Institute members. A number of models of rooms also help to illustrate recent achievements of members of the Institute.

As the League is a private club, it was deemed unfair to try to use the submissions to tell any particular story of stylistic expression. The only criterion of judgment by the various committees was excellence in achievement of the exhibitors' aims. Because of lack of space, far less than half of the exhibits submitted were accepted.

Apropos the matter of stylistic expression, of the architectural exhibits particularly, the Committee on Architecture made special efforts to obtain work in the so-called modern style. This was done with a view to presenting a fair comparison of these works with those of accepted styles. Certain works of the 1886 period were gathered from old publications to illustrate the changes that have come about in fifty years. It was thought that these exhibits would lend spice to the show.

Participation of the Federal Government and

HOUSE OF MARGARET OWEN
BEDFORD FOUR CORNERS, NEW YORK

VERNA COOK SALOMONSKY,
ARCHITECT

Photograph by Robert MacLean Glasgow

HOUSE OF MRS. F. B. LEFFERTS
WILTON, CONNECTICUT

EVANS, MOORE AND WOODBRIDGE,
ARCHITECTS

Photograph by Drix Duryea, Inc.

Photograph by Gerecke

MIAMI AIRPORT, MIAMI, FLORIDA
DELANO & ALDRICH, ARCHITECTS

Municipal Governments in the practice of architecture is a characteristic of our immediate time. This is not new but its scope and proportion are new. It was thought that the results of this activity would not only date the 1936 Exhibition but should be presented to the New York public.

In view of the forthcoming 1937 Paris Exposition and the New York one of 1939, it was thought that an exhibit of the French project would be stimulating to us. Such an exhibit was sent by the French authorities.

No especial deviation from the usual rule of selecting the best available material characterized the display of landscape architecture, painting, sculpture, and craftsmanship.

Criticism of the exhibition and of the individual exhibits is anyone's business. The Exhibition Committee has done its best to present a picture of reality without prejudice. My own comment, as Chairman of the Exhibition Committee, is that while a sober good taste is generally exhibited, particularly in comparison to the 1886 exhibits, there is a lack of freshness and conviction in the works shown. Whether one is a right or a left winger, I think there is one point upon which even these warring factions will agree, i. e., that character, which comes of sincerity and which must have invention, is essential to the progress of art. This is, to a large extent, disappointingly lacking in the 1936 exhibition.

PORTFOLIO

RAILROAD STATION, VALLEY STREAM, LONG ISLAND. EDGAR I. WILLIAMS, ARCHITECT.

UNIVERSAL HOUSE, LONDON, ENGLAND. JOSEPH EMBERTON, ARCHITECT.

UNITY HOUSE, FOREST PARK, PENNSYLVANIA. WILLIAM LESCAZE, ARCHITECT.

HALL OF RECORDS, ANNAPOLIS, MARYLAND. LAURENCE H. FOWLER, ARCHITECT.

TENNIS SHELTER BUILT FOR SHERMAN PRATT. JOHN WALTER WOOD, ARCHITECT.

MARKET STREET STATION, NEWARK, NEW JERSEY. McKIM, MEAD & WHITE, ARCHITECTS.

BOY SCOUT THEATER INTERIOR, FOREST OF SPALA.

BATHING CENTER AND WEEK-END RESORT AT INGIERSTRAND, OSLO, NORWAY. EYVIND MOESTUE AND OLE LIND SCHISTAD, ARCHITECTS.

DOUBLEDAY DORAN BOOKSHOP, CHICAGO, ILLINOIS. DESIGNED BY MORRIS LAPIDUS, ARCHITECT FOR ROSS-FRANKEL, INC.

REMODELED HOUSE OF MARY SACHS, HARRISBURG, PENNSYLVANIA. ELEANOR LEMAIRE, INTERIOR ARCHITECT.

CENTRAL HEATING PLANT, WASHINGTON, D. C. UNITED ENGINEERS AND CONTRACTORS, ARCHITECTS AND ENGINEERS; PAUL P. CRET, CONSULTING ARCHITECT.

THE HARRIS BUILDING AND LOAN BUILDING, HARRISBURG, PENNSYLVANIA. EDMUND GEORGE GOOD, JR., ARCHITECT.

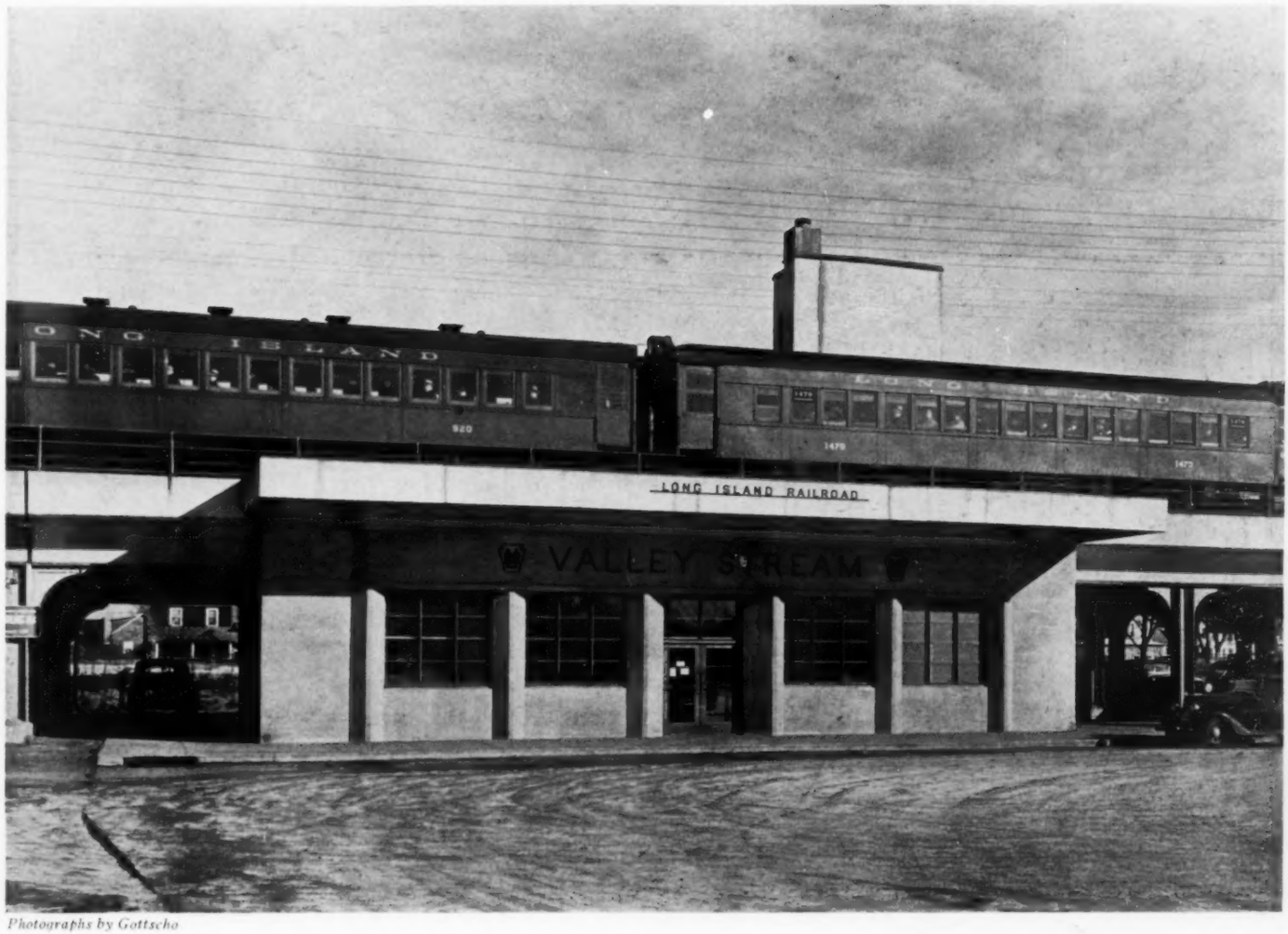
THE SOUTHEASTERN OPTICAL BUILDING, RICHMOND, VIRGINIA. LEE, BALLOU & VANDERVOORT, INC., ARCHITECTS.

CAFE LARUE, NEW YORK CITY. SCOTT AND TEEGEN, ARCHITECTS.

MINNEAPOLIS ARMORY BUILDING, MINNEAPOLIS, MINNESOTA. MAJOR P. C. BETTENBURG, ARCHITECT; WALTER H. WHEELER, CONSULTING ARCHITECT AND ENGINEER.

SPECIAL BUILDING TYPES

LONG ISLAND RAILROAD



Photographs by Gottscho

RAILROAD STATION, VALLEY STREAM, LONG ISLAND

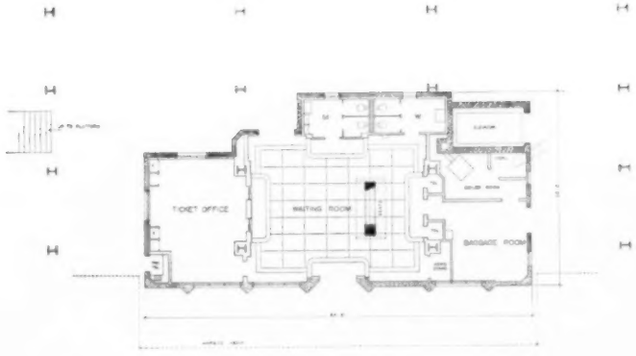
EDGAR I. WILLIAMS
ARCHITECT

The problem was to relate a station architecturally to the raised track of the Long Island Railroad. Another feature was to keep it free from the track structure so as to avoid vibration. The building is of reinforced concrete to conform with the track structure. It will have the same constant attention that the rail roadway receives. The exterior has natural concrete color — portland cement and Cow Bay sand; the interior is a slightly blue tinted oil emulsion base finish above a bright blue tile wainscot.

Photograph by Gottscho

RAILROAD STATION, VALLEY STREAM, LONG ISLAND

EDGAR I. WILLIAMS
ARCHITECT



Photograph by A. Percival & Co.

UNIVERSAL HOUSE **LONDON, ENGLAND**

JOSEPH EMBERTON
ARCHITECT

The firm of Beck & Pollitzer, Ltd., wharfingers, occupies only a part of this building; the remaining store and loft space is rented to individuals who require a river location. This building replaces an old two-story warehouse and is constructed with strict regard for economy. The building frame is steel, having outer walls cantilevered so as to remove the pile foundations as far as possible from the adjoining bridge footings. The exterior face of the building is of glass (Vitrolite) applied to concrete which, in turn, is lined with cork for insulation. The selection of glass for wall facing was due to the proximity of a railway station and to the dirty atmosphere of the neighborhood. There are continuous windows so as to supply maximum daylighting. Some of these open and are of hospital type.

Photograph by Topical Press Agency, Ltd.

UNIVERSAL HOUSE **LONDON, ENGLAND**

JOSEPH EMBERTON
ARCHITECT

Drafting room overlooking the Thames. Large continuous windows were adopted so as to give maximum daylighting. Alternate windows operate so as to give ventilation without drafts. The building construction is of steel frame and concrete. Outer walls are of concrete, backed with cork, and faced with Vitrolite. This glass surface is self-cleaning. Floors are of hollow tile.

Photograph by A. Percival & Co.

STAIRWAY FROM LOBBY

UNIVERSAL HOUSE, LONDON, ENGLAND

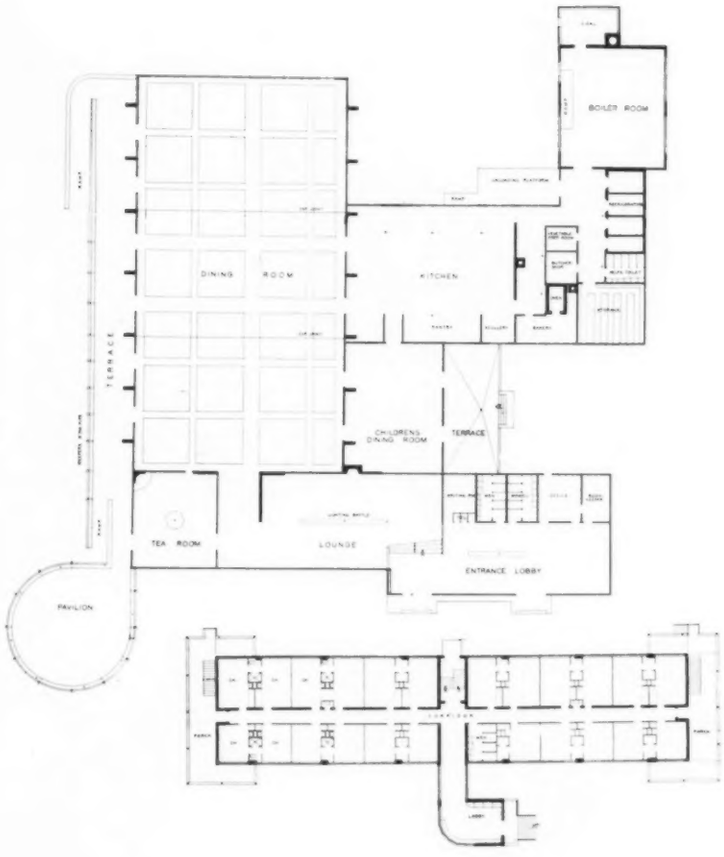
UNITY HOUSE **FOREST PARK, PENNSYLVANIA**

WILLIAM LESCAZE
ARCHITECT

Unity House is the summer camp of the International Ladies' Garment Workers Union. Begun as a vacation camp in the Catskills for New York Local Union No. 25, the present site was acquired in 1919. Located in the heart of the Pocono Mountains, the tract consists of 750 acres of wooded land, together with a two-mile lake. The tract had on it an old resort hotel which, in 1920, was rebuilt to convert the buildings to convenient vacation usage. The capacity was then 300 persons. The increasing popularity of the resort led to need of increased facilities. William Lescaze, architect, was engaged to work out plans for expansion to accommodate 1,000 persons. The buildings shown are the first to be completed under the new plan.

UNITY HOUSE

FOREST PARK, PENNSYLVANIA



Main Building: Correct analysis of function resulted in correct plan; notice location and interrelation of tea room, main dining room, and children's dining room. Similar separation of lobby and lounge confines arriving and departing guests, and transaction of business, to lobby space, leaving lounge free from such interruption.

Dormitory: First unit of series of six. The lobby has again been isolated from rest of structure.

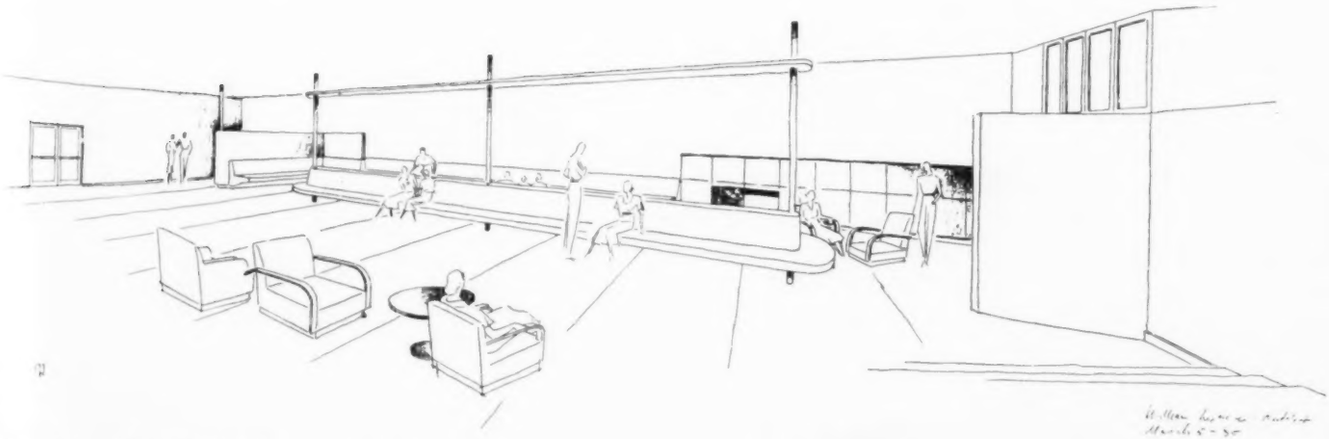
Plot Plan: Structures in solid block to remain in finished development; gray indicates structures planned, dotted lines those to be wrecked. The new buildings are all oriented to take full advantage of view and exposure. The resort has two handball courts, nine tennis courts, two basketball courts. Water sports of all types are provided for in the large lake on the premises.

WILLIAM LESCAZE, ARCHITECT

The interiors at Unity House reflect the general character of the development — spacious, informal, comfortable. Shown here are the bar, tea room, and lounge; located in the main building, they are designed to accommodate the large crowds that gather in this building which is the social center of the development.

THE BAR

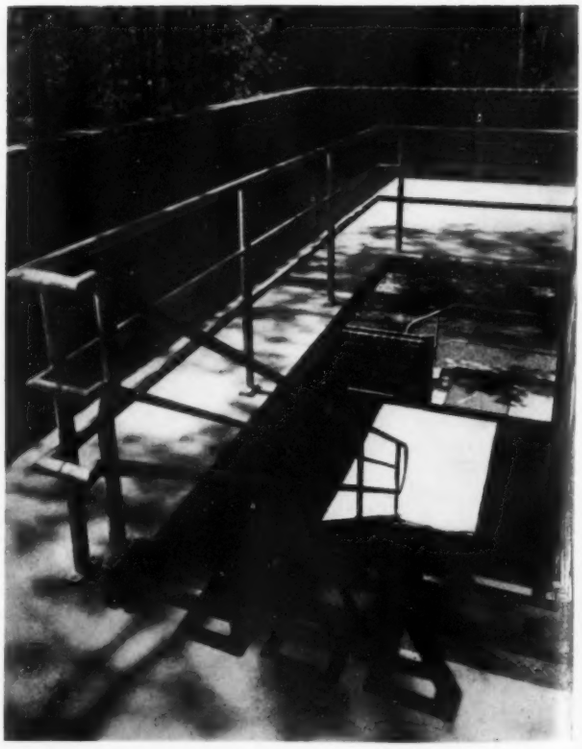
SKETCH OF TEA ROOM



SKETCH OF LOUNGE

UNITY HOUSE

FOREST PARK, PENNSYLVANIA

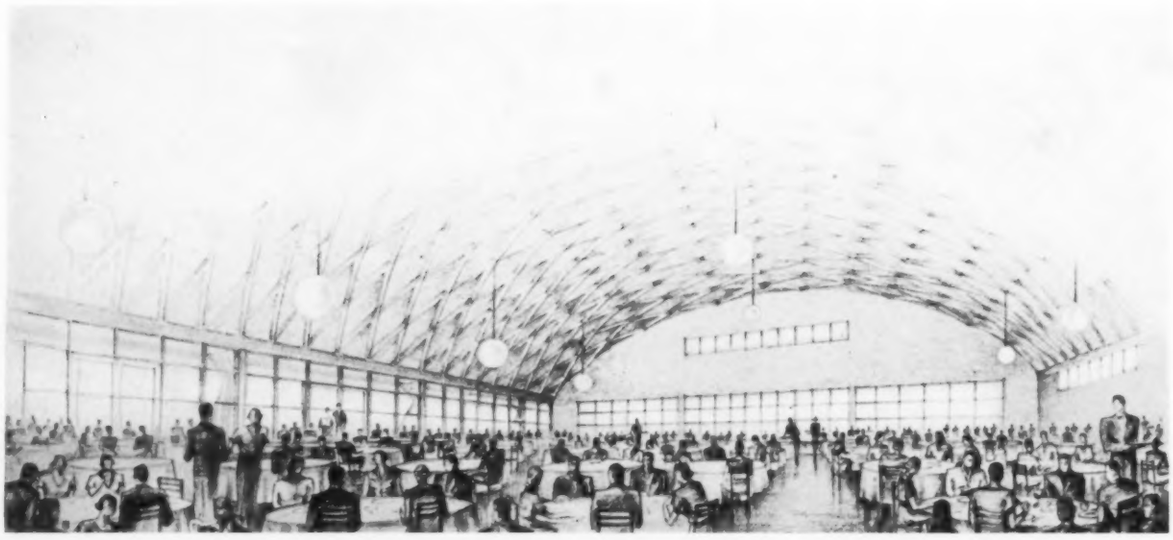


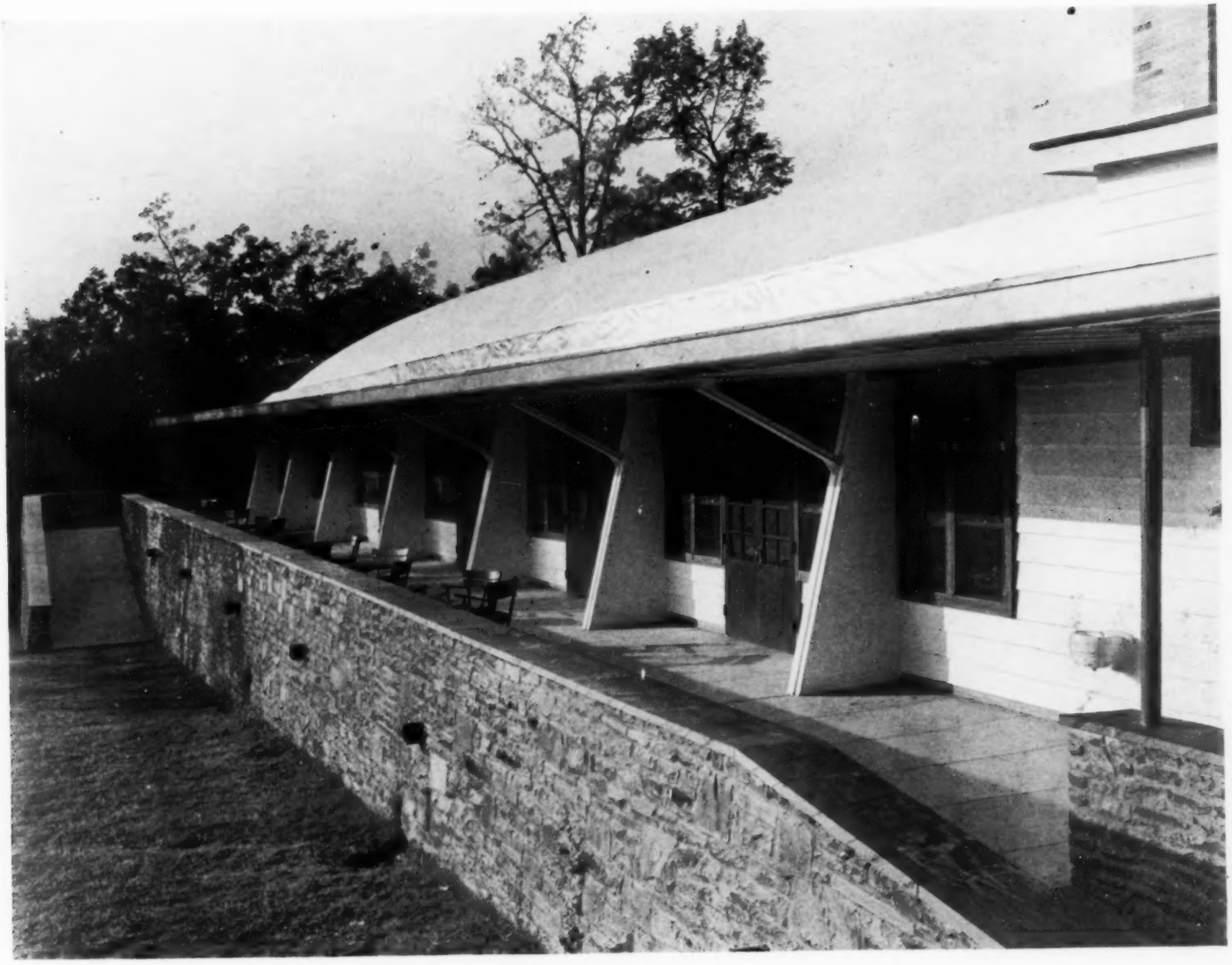
A large membership demands various types of accommodation: both dormitory and cottages are used in the new plan. The new dormitory, shown on this and opposite pages, is the first of a contemplated series. Of semi-fireproof construction with a large glass area, the new building is interesting for the disposition of lobby space. Being literally a dormitory—i.e., rooms, baths, and necessary corridors—a small lobby space was required. By detaching it, the architect succeeded in isolating it from the dormitory proper: disturbance is thereby minimized and the small size discourages lounging.

WILLIAM LESCAZE, ARCHITECT

The new buildings are notable for freedom from conventional style and use of various simple materials—the main building of frame and field-stone, the dormitory of brick, the cottages of frame.

MAIN BUILDING, UNITY HOUSE FOREST PARK



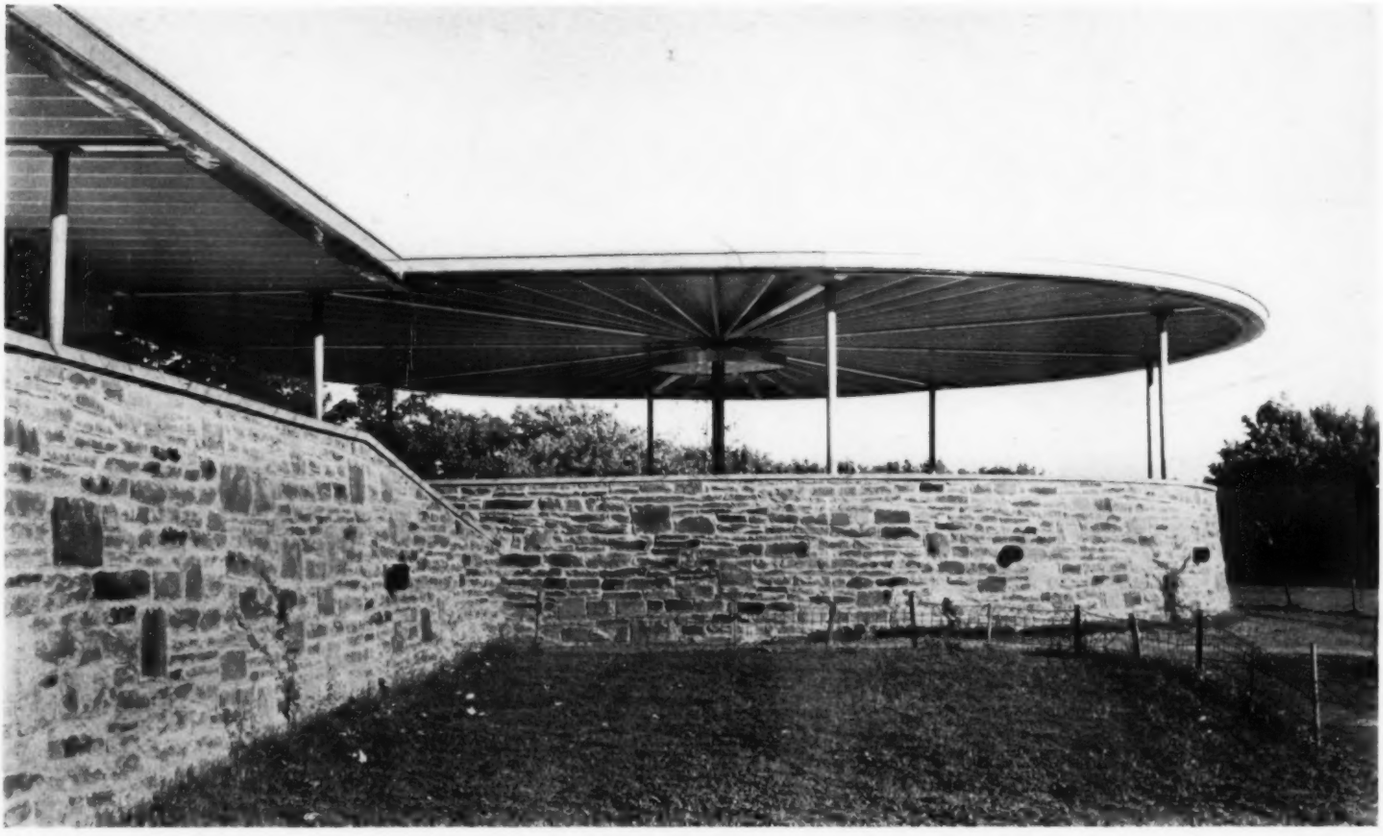


PENNSYLVANIA

WILLIAM LESCAZE, ARCHITECT

WILLIAM LESCAZE
ARCHITECT

The Main Building is designed to serve as the focus of all social activities. Of particular interest is the construction of the main dining room (see opposite page) which, opening onto the long terrace, serves for large parties, dances, and so on.



TWO VIEWS

PAVILION, MAIN BUILDING

UNITY HOUSE **FOREST PARK, PENNSYLVANIA**

WILLIAM LESCAZE
ARCHITECT

One of six cottages erected for married couples. Of these six, four are six-room and two are eight-room cottages. Rooms or suites of rooms have private entranceways to porches.

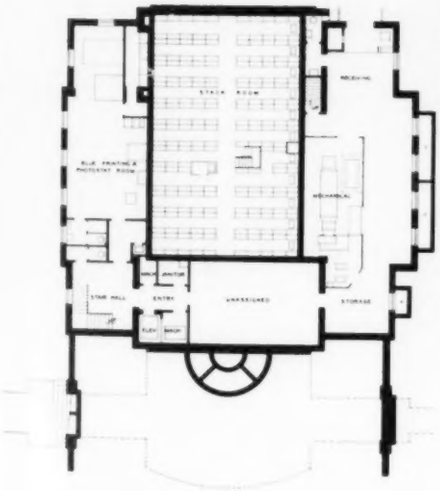
HALL OF RECORDS

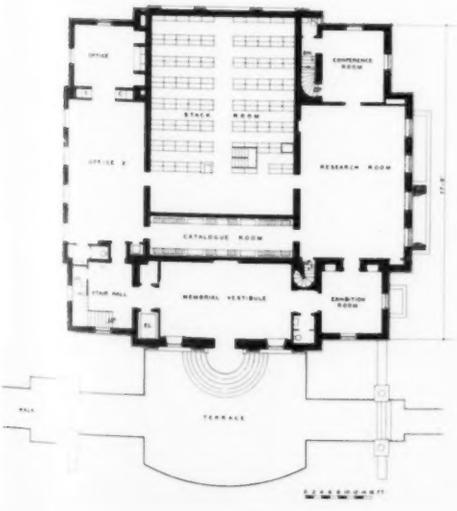
ANNAPOLIS, MARYLAND

LAURENCE H. FOWLER
ARCHITECT

The Hall of Records at Annapolis was erected by the State of Maryland to commemorate the three hundredth anniversary of the founding of the province. Two hundred thousand dollars had been appropriated by the legislature for the construction and equipment of a building to house, and make available for research, all surviving documents pertaining to the history of the state; and a site had been provided at the southwest end of the campus of St. John's College.

This site, by its very nature, offered a number of problems. The campus, a tree-shaded green measuring 250' x 800', is bordered on one of its long sides by a street—College Avenue—and on the other by a row of five brick buildings dating roughly from the middle of the 18th century to the middle of the 19th, the central building (the oldest and largest) having a hip roof crowned by a cupola. At right angles to this row, closing one end of the college campus, stands the dignified little college library, designed in the Georgian manner by T. Henry Randall thirty-five years ago. The site designated for the Hall of Records, at the other end of the college campus, naturally called for a structure somewhat similar in size and position, to take its place as one of the college group and, indeed, a condition actually attached to the use of the site required that the building to be erected there should have its principal façade and entrance facing the campus. While the sloping grade of the site made this condition somewhat troublesome, a greater difficulty was caused by the fact that the building, being for state rather than for college use, had to be readily accessible to the general public. Therefore the main approach, a brick walk, had to come from College Avenue at the side, instead of from the campus in front. However, greatest of all





the problems presented by the site was that of size. The minimum requirements for the Hall of Records called for a building having a cubic content considerably greater than that of any other building on the campus. It became necessary, therefore, to arrive at some design which should be large enough to meet these minimum requirements, while still appearing small enough to take its proper place among the other less extensive buildings of the group. In its final form, the mass of the structure was largely determined by the necessity for it to appear as small as possible; it was therefore given a flat roof, in this respect following an English rather than the American precedent.

The construction is fireproof: brick bearing walls, steel girders, and reinforced concrete floor and roof slabs. The specially hand-made face brick—a reproduction in size, color and texture of the Annapolis Colonial brick—is laid, with tight joints, in Flemish bond. The steps, and the coping and finials of the terrace walls, are of white marble. The cornices, window frames and sash, and the entrance door are of wood, while parts particularly subject to deterioration, such as copings, window sills, and the capitals and bases of the pilasters, are of limestone; but wood and limestone alike are finished to give a uniform white painted surface.

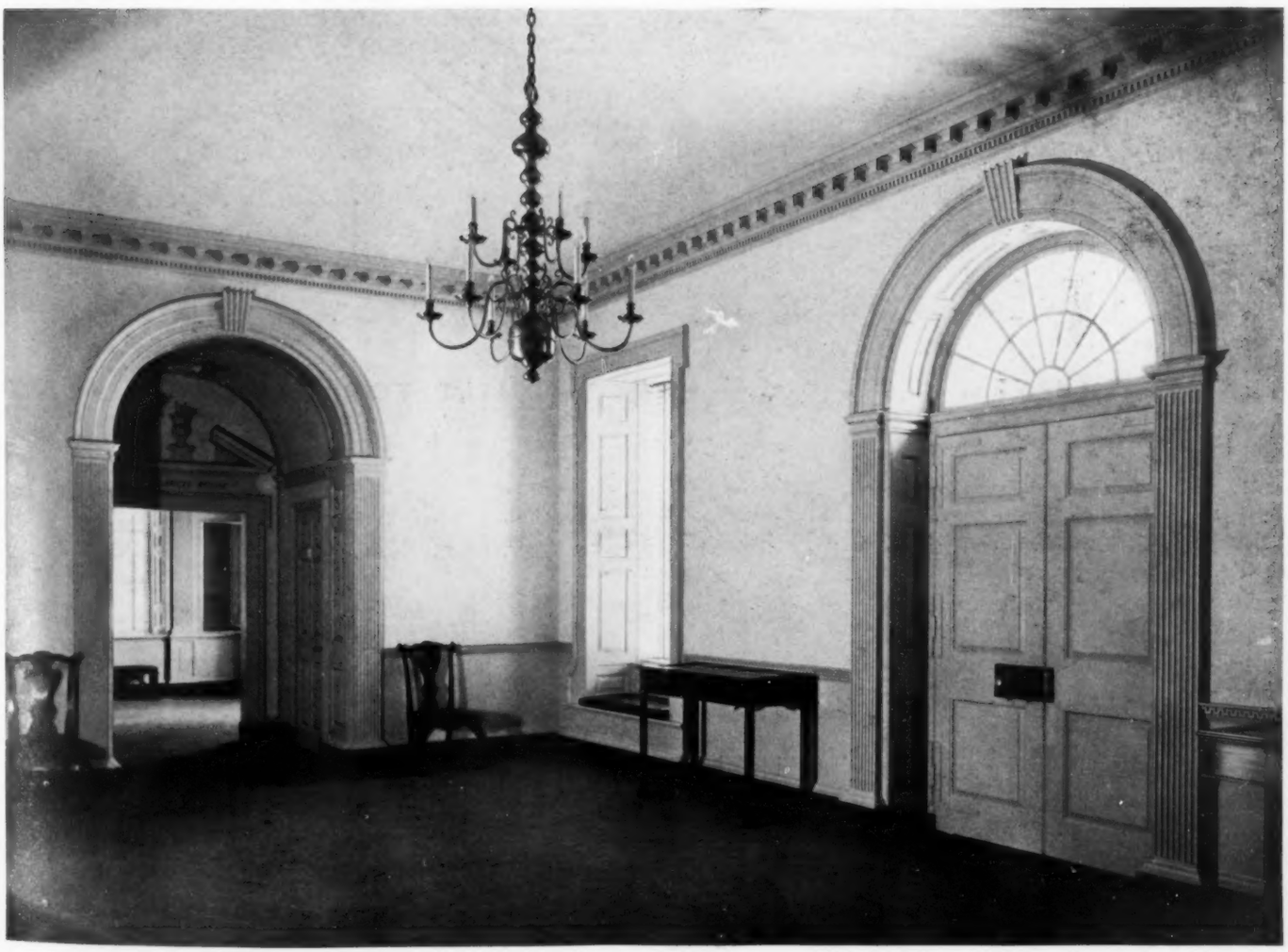
Exclusive of professional fees, the building cost 60 cents a cubic foot. This includes furniture and all equipment except the apparatus for photographic reproduction.

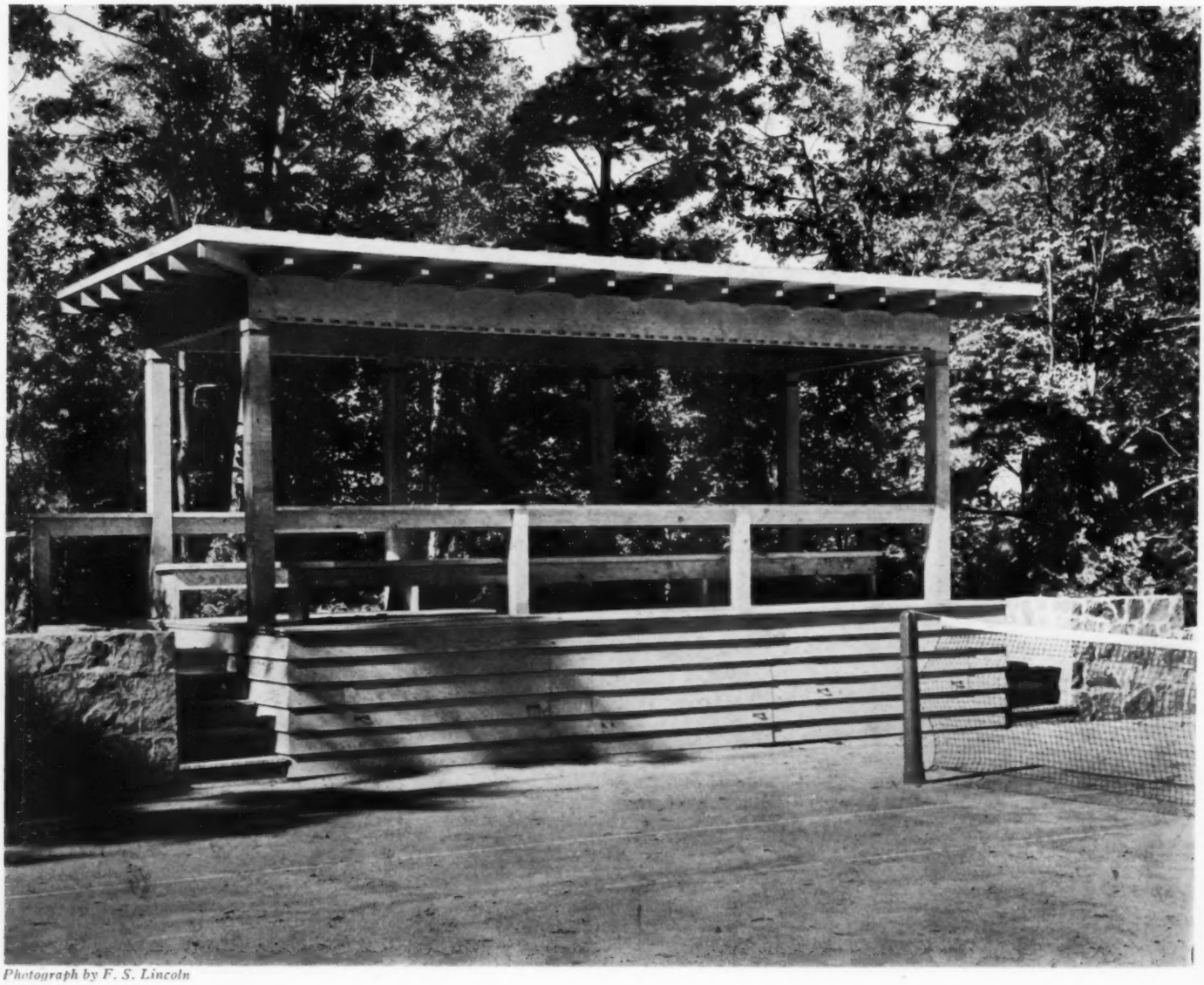
HALL OF RECORDS

ANNAPOLIS, MARYLAND

LAURENCE H. FOWLER
ARCHITECT

Opposite: Research room.
Right: Room for extension work.
Below: Memorial vestibule.





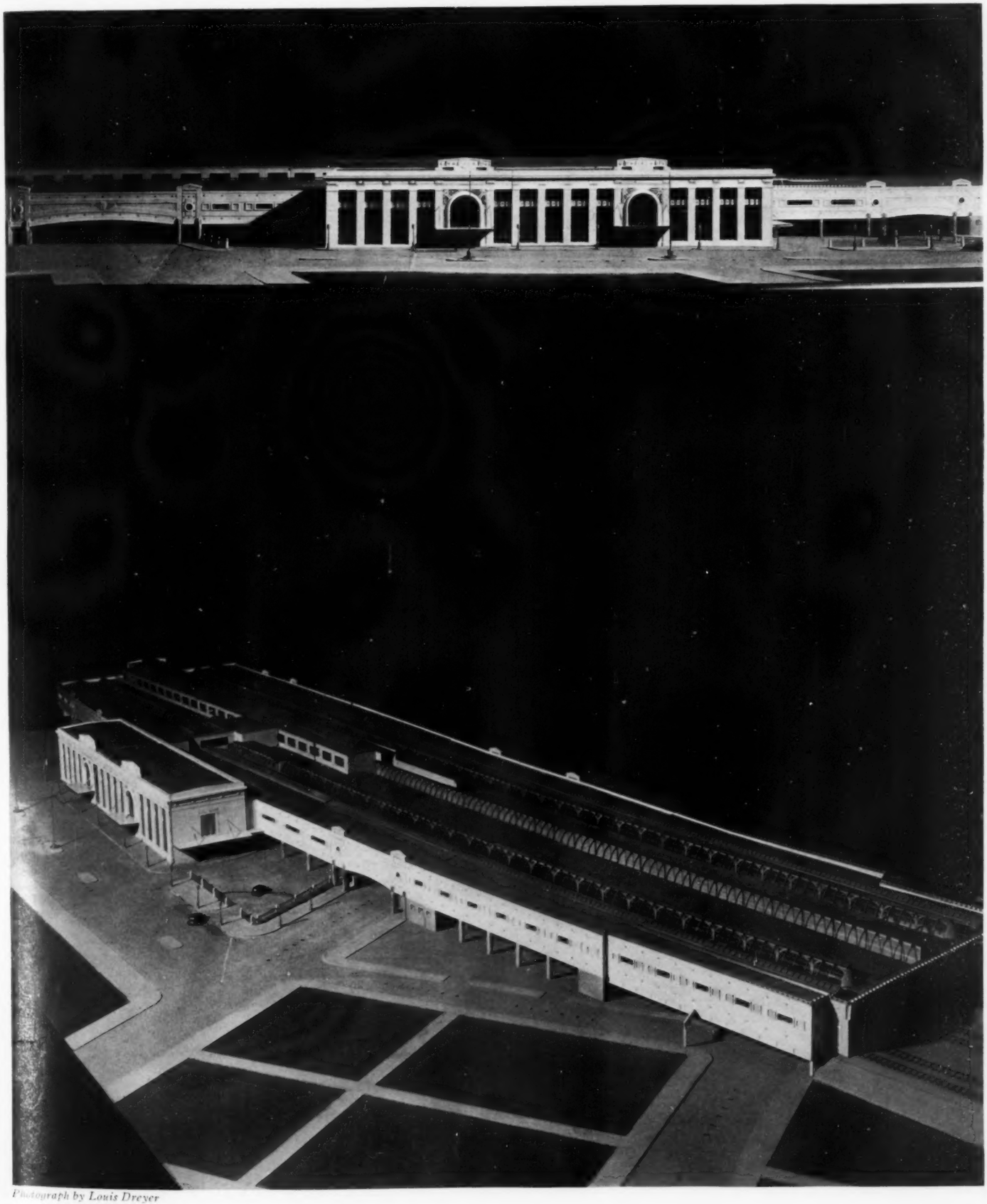
Photograph by F. S. Lincoln

TENNIS SHELTER **BUILT FOR SHERMAN PRATT**

JOHN WALTER WOOD
ARCHITECT

MARKET STREET STATION
McKIM, MEAD & WHITE

NEWARK, NEW JERSEY
ARCHITECTS



Photograph by Louis Dreyer

Photograph by Gottscho

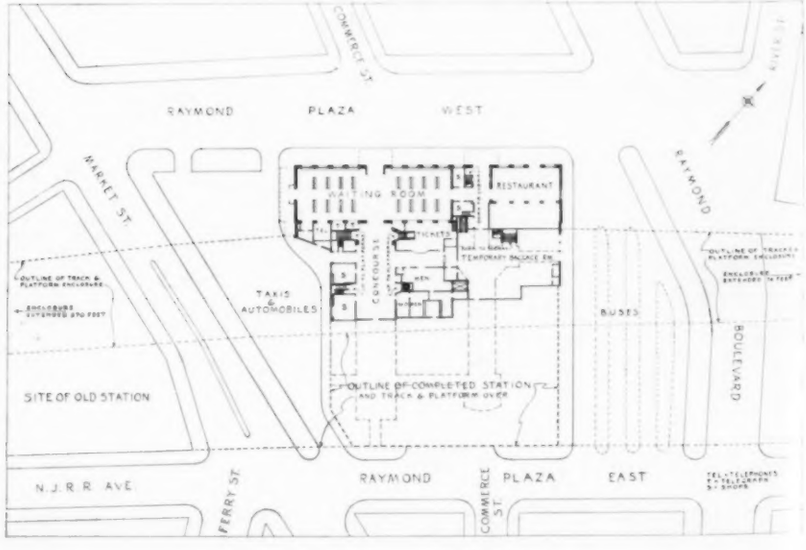
MARKET STREET STATION — NEWARK, NEW JERSEY

Photograph by Louis Dreyer

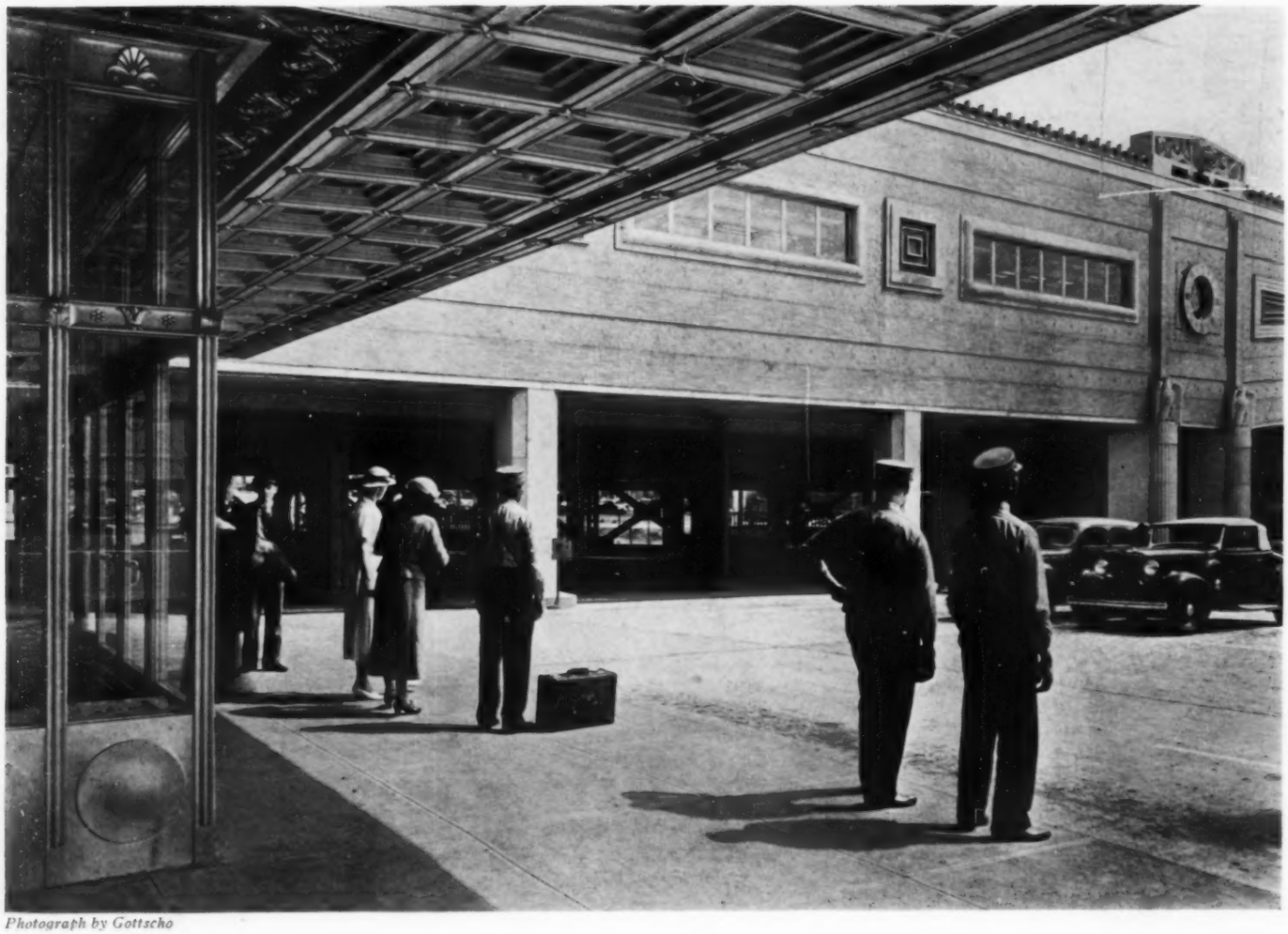
McKIM, MEAD & WHITE
ARCHITECTS

GIBBS & HILL, INC.
STRUCTURAL AND MECHANICAL
ENGINEERS

The station in its present form is but half completed. It is planned to accommodate several types of transportation facilities — the Pennsylvania Railroad, Rapid Transit, new City Subway, and several bus lines. These are handled on three levels—underground, surface, and elevated: the plan reflects this separation of function.



PENNSYLVANIA



Photograph by Gottscho

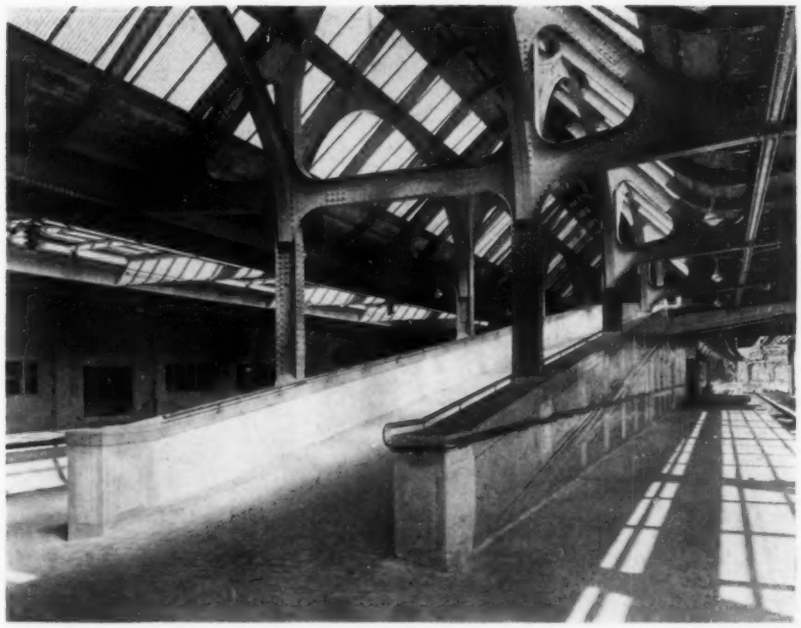
Above: A wide variety of material has been used in the various parts of the structure. The main building is of gray Indiana limestone; base and two large archways, rubbed pink granite; carved panels, limestone; windows and marquees, aluminum; doors, formica. **Opposite page:** The train sheds at the second level. Steel is used here simply and intelligently; good design results.

MARKET STREET STATION

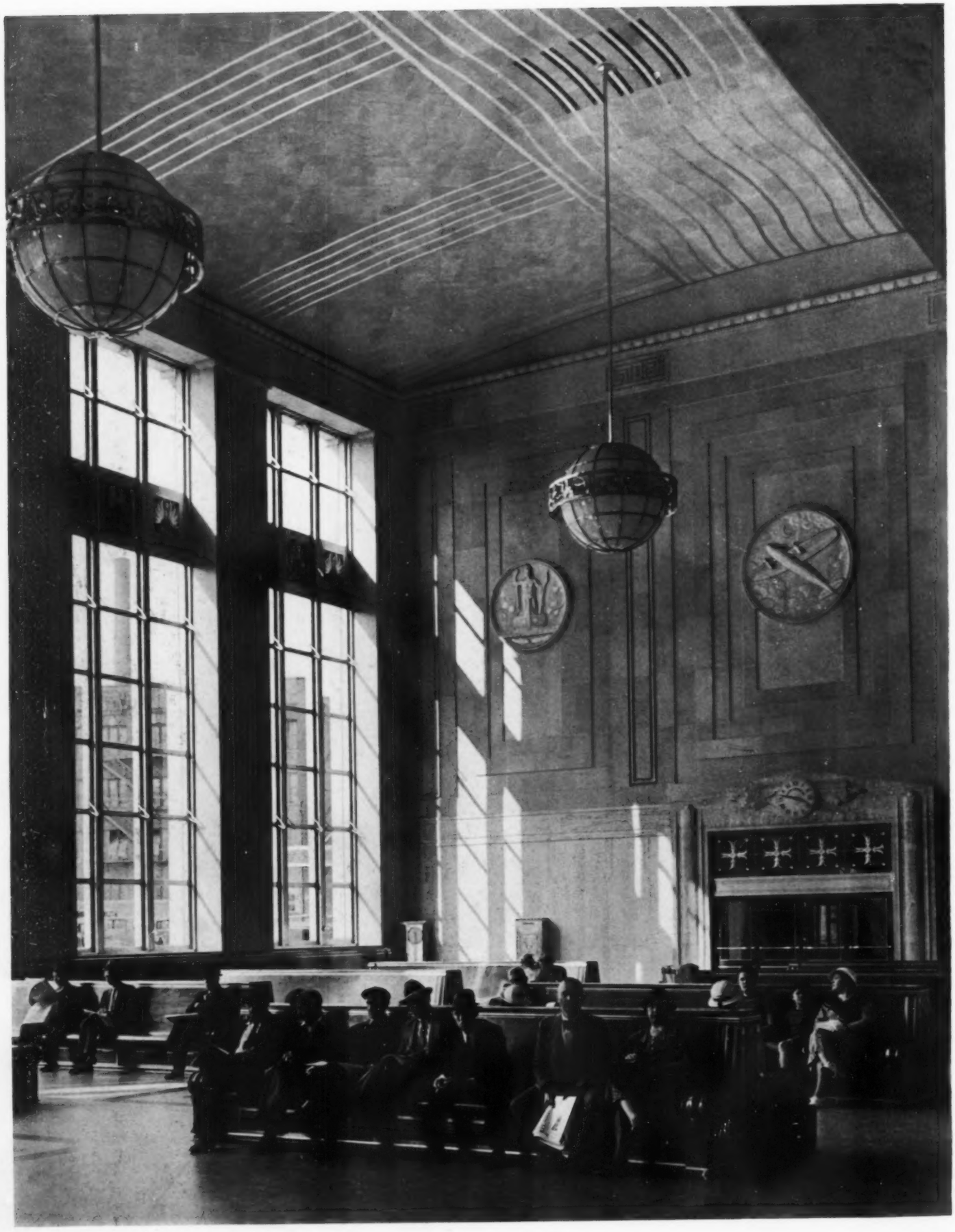
NEWARK, NEW JERSEY

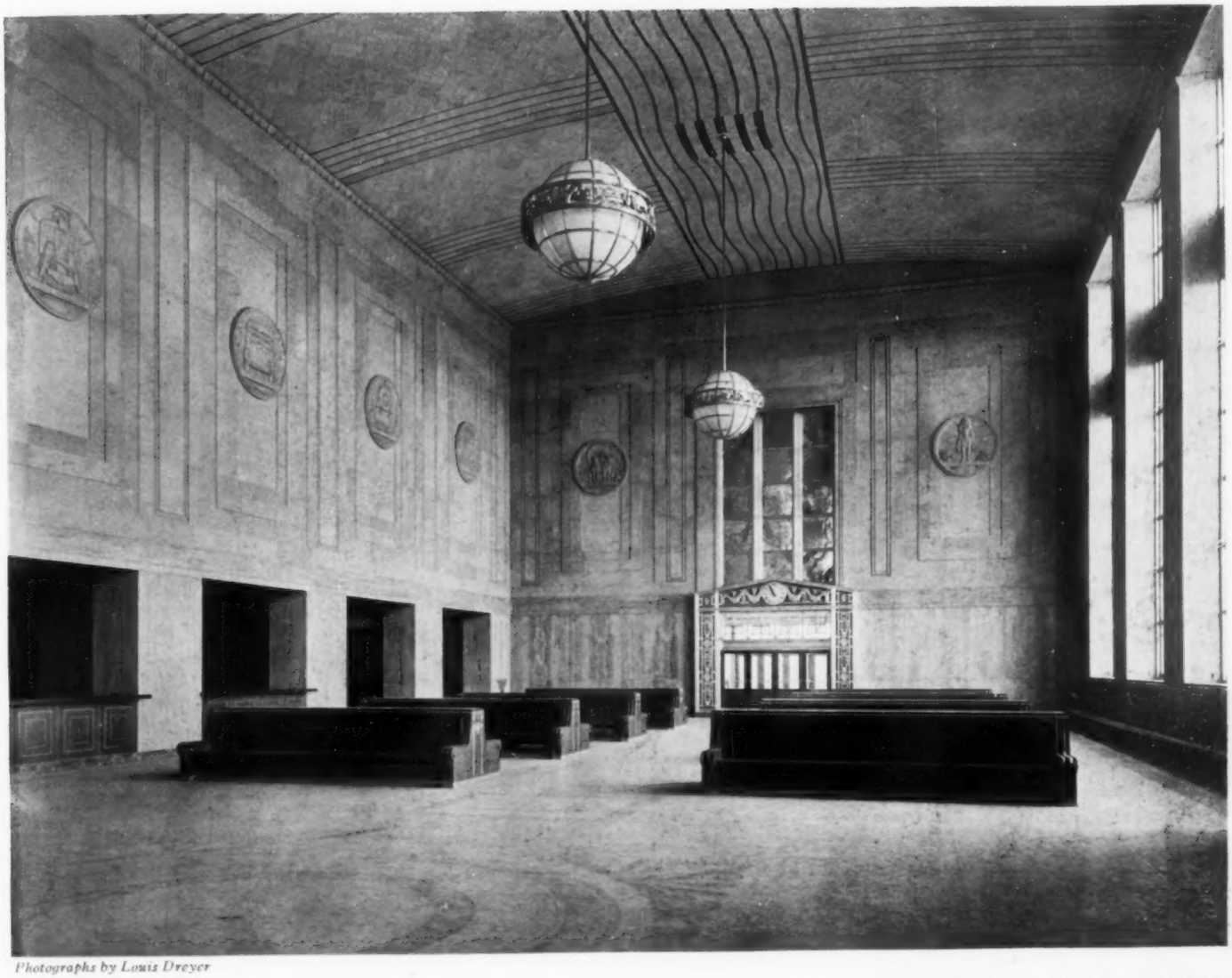
McKIM, MEAD & WHITE

ARCHITECTS



Photographs by Louis Dreyer



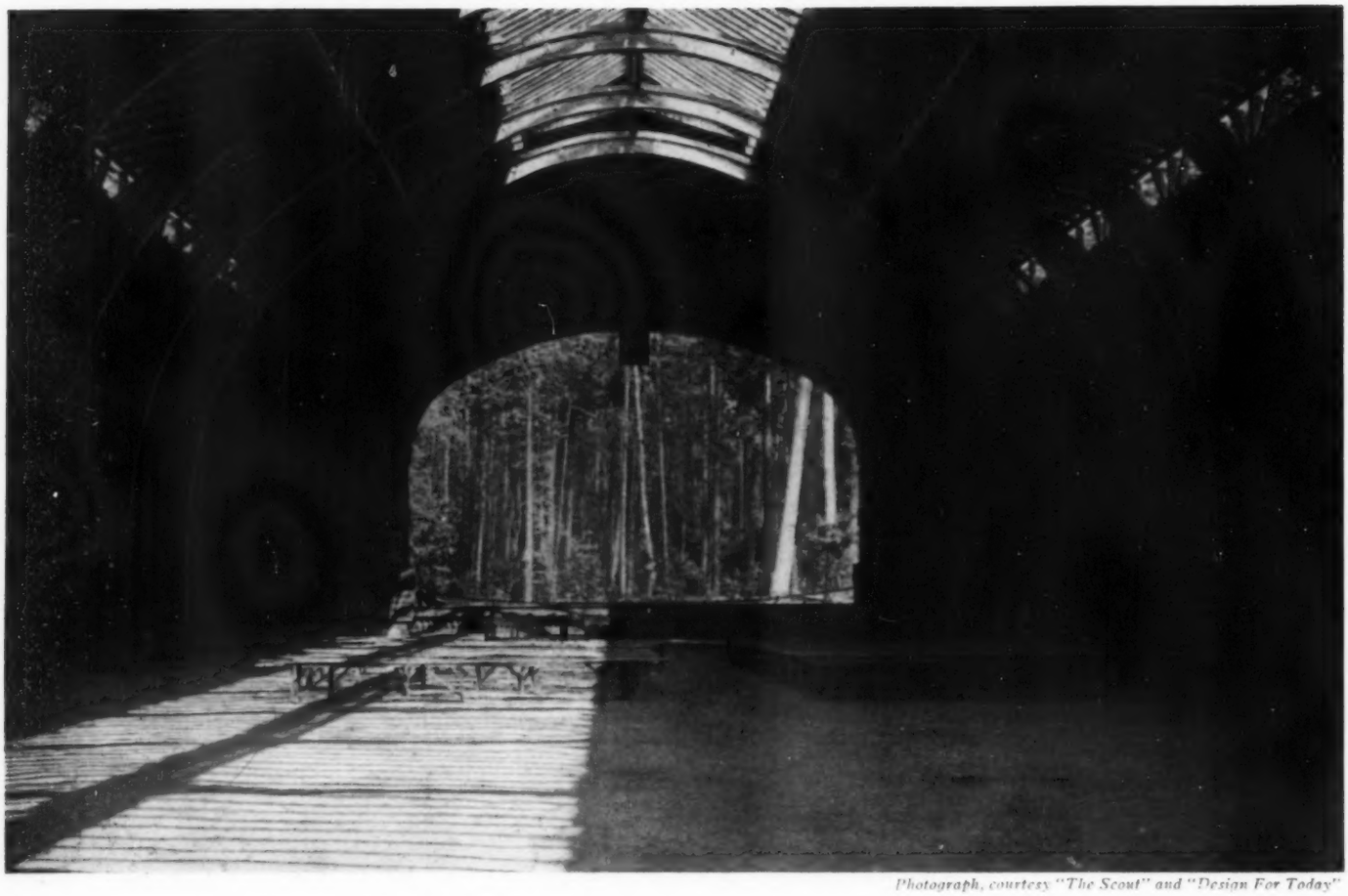


Photographs by Louis Dreyer

MARKET STREET STATION **NEWARK, NEW JERSEY**

McKIM, MEAD & WHITE
ARCHITECS

The main waiting room is 175 feet long, 18 feet wide, with a 46-foot ceiling. Floors are red terrazzo with black and yellow inlay; wainscot, rose yellow travertine; ceiling, acoustical material in blue with gold leaf decorations; benches, gray walnut inlaid with aluminum. A feature of the room is a large window at one end glazed with variegated marble panels.

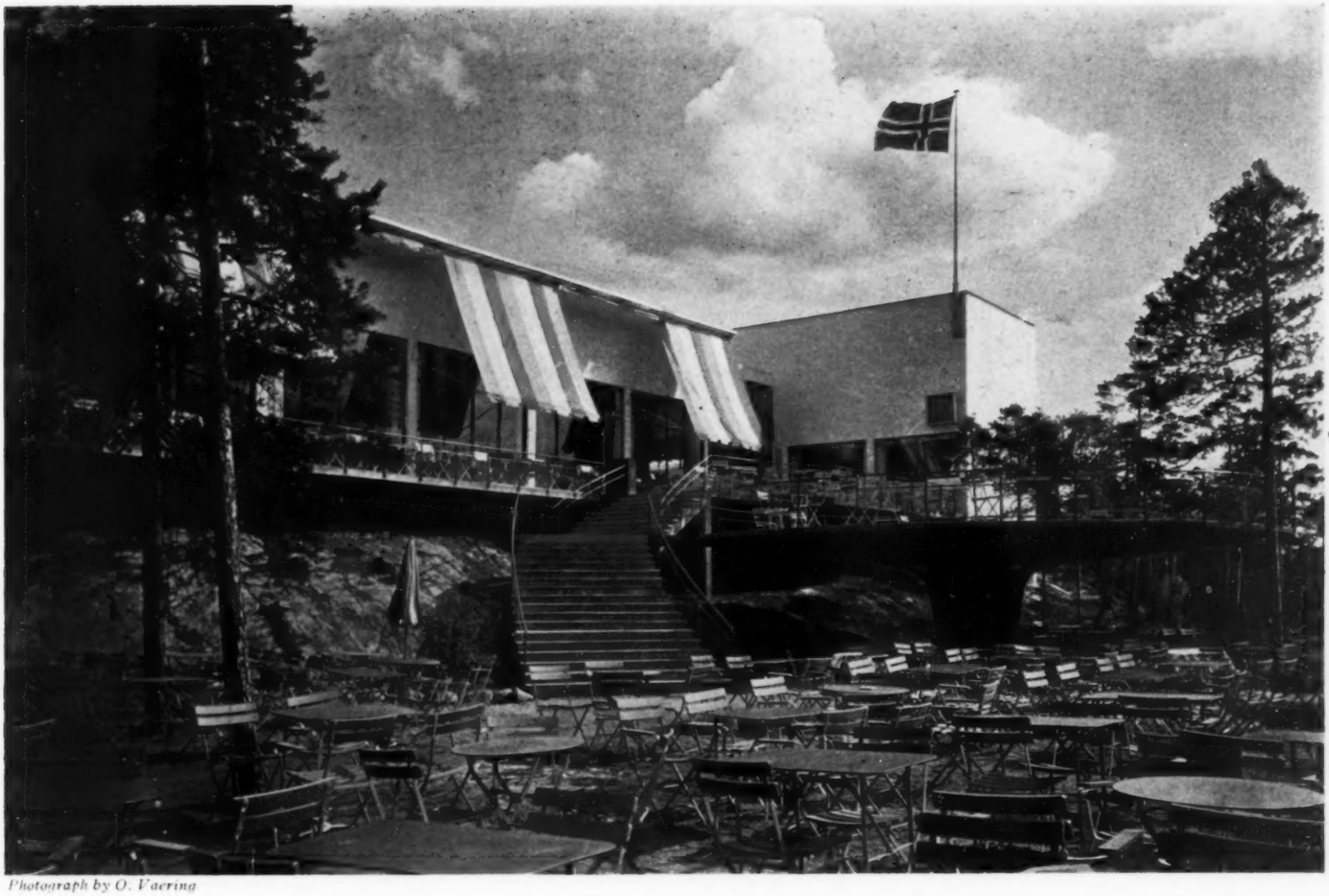


Photograph, courtesy "The Scout" and "Design For Today"

BOY SCOUT THEATER INTERIOR

FOREST OF SPALA

This theater utilizes the adjoining forest as a back drop for the stage which is located outside the theater. It was built in the heart of the Forest of Spala by Polish Boy Scouts for their national assembly. It is constructed entirely of wood and receives its lighting from overhead. Floodlights are used to illuminate the stage at night.



Photograph by O. Vaering

BATHING CENTER AT INGIERSTRAND, OSLO, NORWAY

EYVIND MOESTUE AND OLE LIND SCHISTAD,
ARCHITECTS

Ingierstrand is located about three miles from Oslo, Norway, and is its newest bathing center. It is located in a typical Norwegian setting on the edge of a fjord with a rugged surrounding of rock and pine. Full advantage has been taken of the slope of the ground to provide terraces and to locate the bathing pool. This establishment has also been adopted as a popular social center for summer use only. The character of the construction of the buildings, such as the restaurant and social hall, is suited to this summer use. There is ample provision for opening walls and for permitting maximum views. The major construction is of concrete without any attempt having been made to provide insulation or heating. The building project was initiated in February and completed before the end of May.

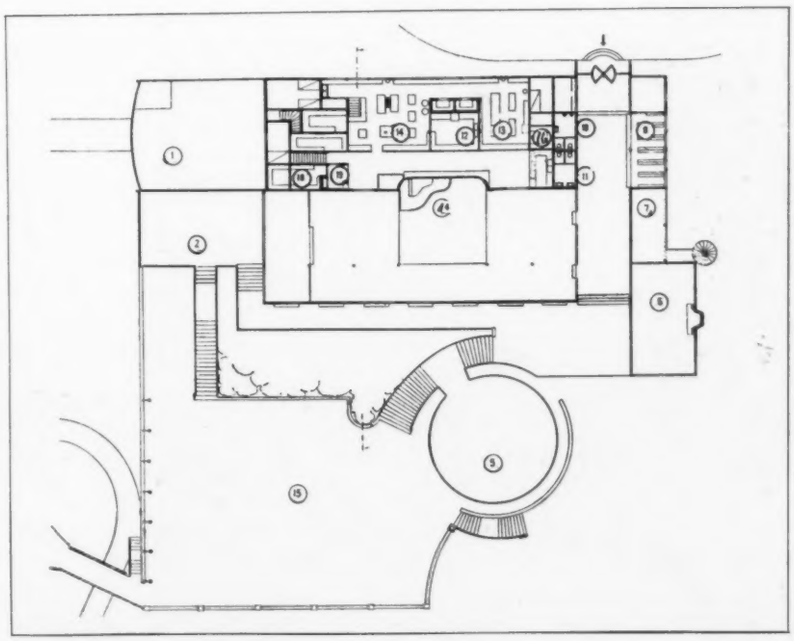
Photograph by O. Vaering

WEEK-END RESORT AT INGIERSTRAND

OSLO, NORWAY

EYVIND MOESTUE AND OLE LIND SCHISTAD ARCHITECTS

On this page . . . RESTAURANT TERRACE. The concrete mushroom platform is intended for dancing on the upper level in fair weather and below in inclement weather. **On the opposite page . . .** STAIR TOWER leading to a roof terrace overlooking the Fjord.



1 YARD
2 NORTH TERRACE
4 DANCE FLOOR
5 DANCE FLOOR
6 COFFEE ROOM
7 PERGOLA
8 CLOAKROOM
10 GENTLEMEN
11 LADIES
12 WASHING-UP
13 COLD KITCHEN
14 HOT KITCHEN
15 LOWER TERRACE
16 STORE
18 WINE
19 BEER

Photographs by O. Vaering

BATHING CENTER **OSLO, NORWAY**

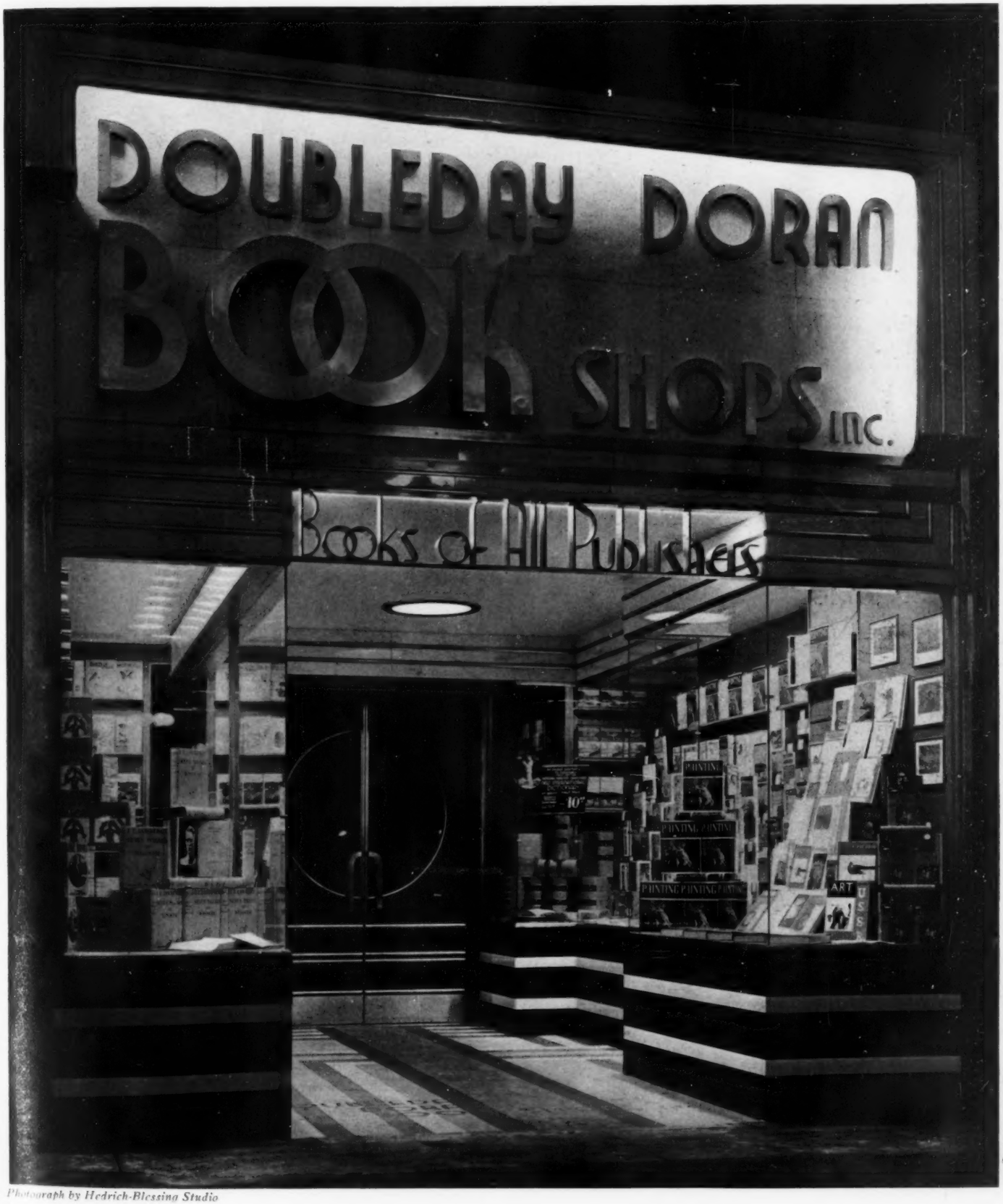
EYVIND MOESTUE AND OLE LIND SCHISTAD

ARCHITECTS

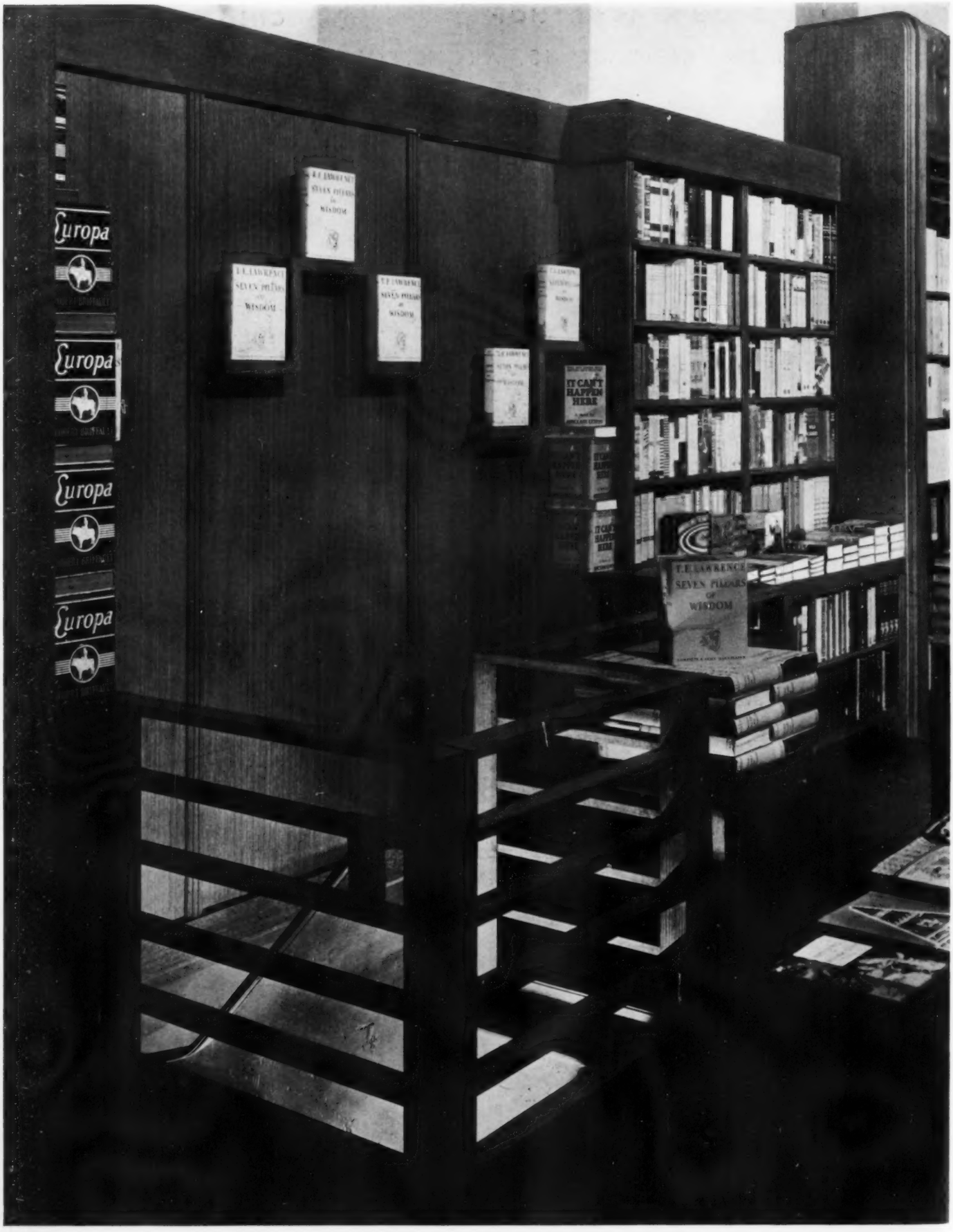
Interior view of dining room, above. The main window group overlooks a fjord and surrounding rugged landscape. At the height of the summer season a dining terrace supplements the dining inclosure. The view at left is an interior of the coffee room. Study of the plan will indicate the social purposes of the resort. Major space is given over to dining and dancing.

DOUBLEDAY DORAN BOOKSHOP **CHICAGO, ILLINOIS**

DESIGNED BY MORRIS LAPIDUS, ARCHITECT FOR ROSS-FRANKEL, INC



Photograph by Hedrich-Blessing Studio


Europa
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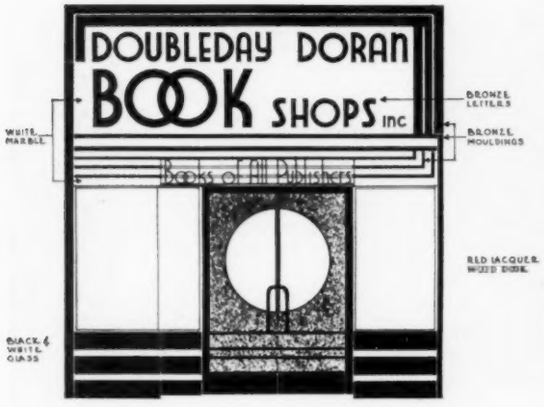
T.E. LAWRENCE
SEVEN PILLARS
OF
WISDOM
IT CAN'T
HAPPEN
HERE

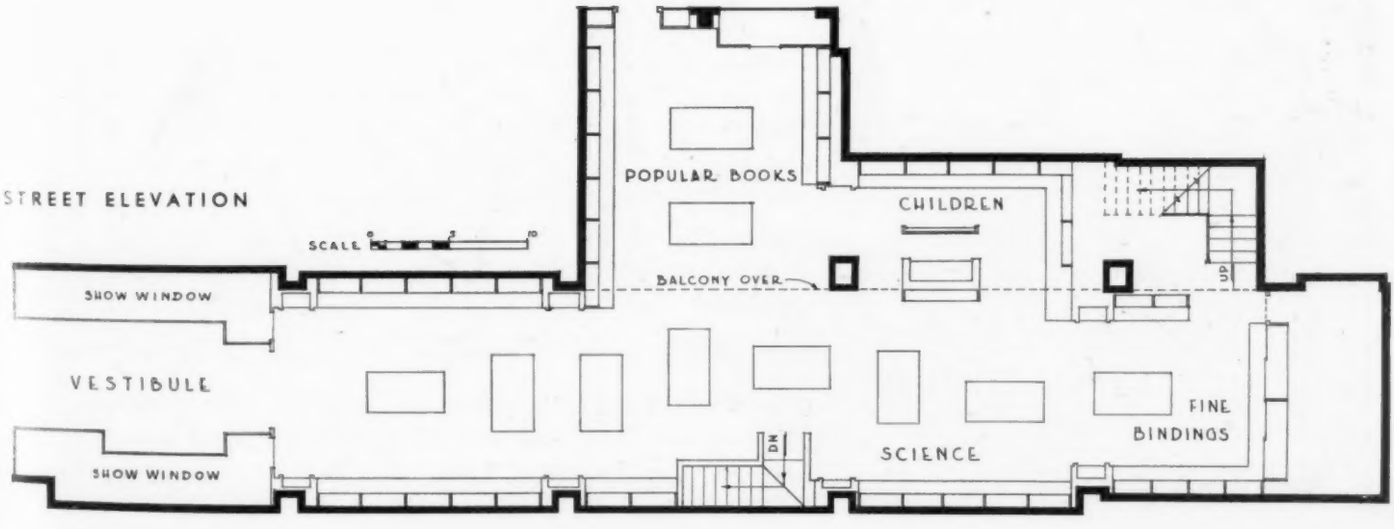
The architect faced the problem of providing separate departments for various types of books, but for efficient operation the plan had to be kept simple. Using an irregular building, an intelligent solution has been evolved. Interior: All shelving, counters, and storage space are of rift sawn oak in olive brown; linoleum floor in brown tan, burnt sienna and black; all counter surfaces in black linoleum; walls in burnt sienna and brown. Exterior: Facings in black and white glass, bronze trim and molds, red-lacquer doors, rift sawn oak show windows.

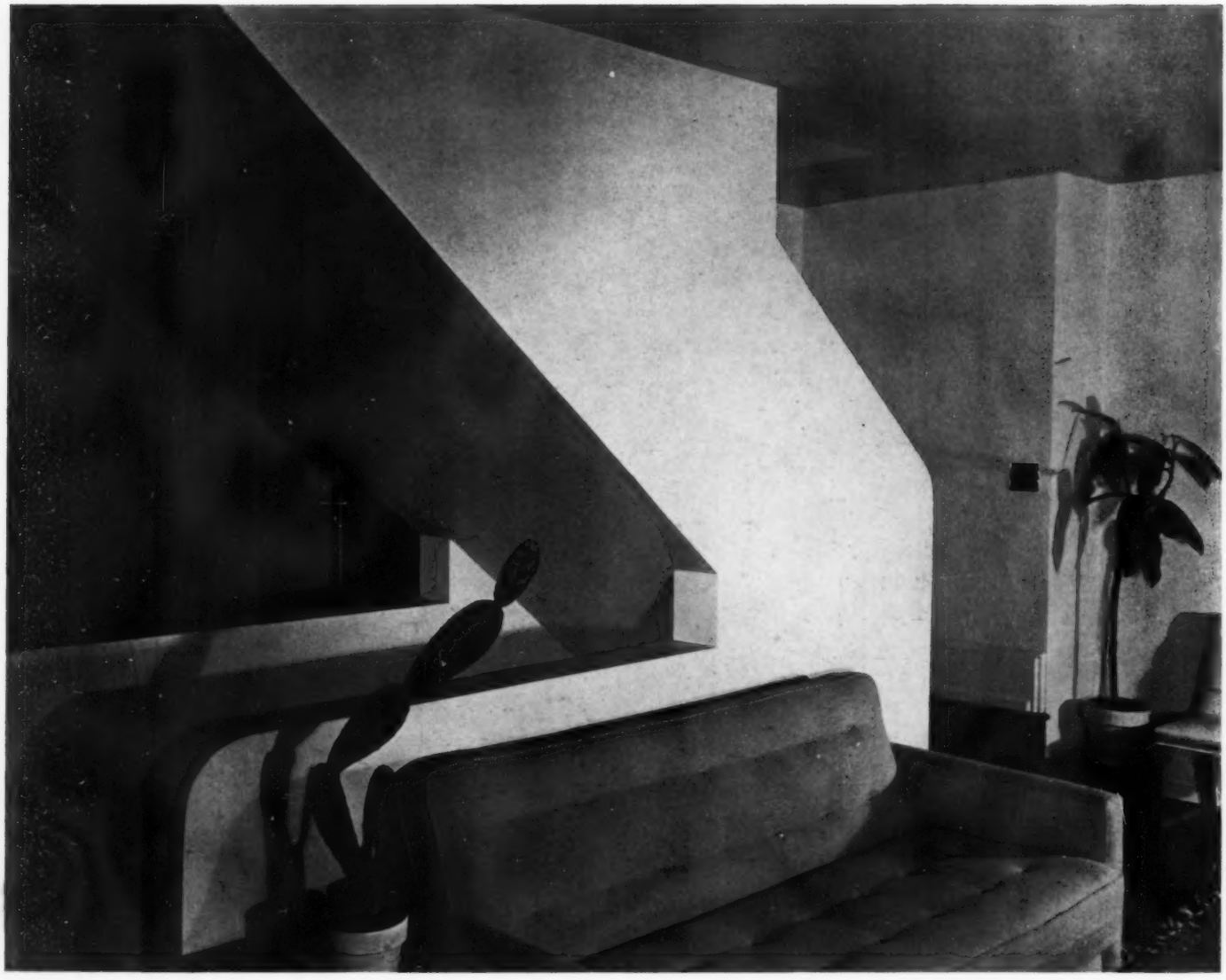


Photographs by Hedrich-Blessing Studio

DOUBLEDAY DORAN BOOK SHOP, CHICAGO, ILLINOIS

Designed by MORRIS LAPIDUS, ARCHITECT for Ross - Frankel, Inc.



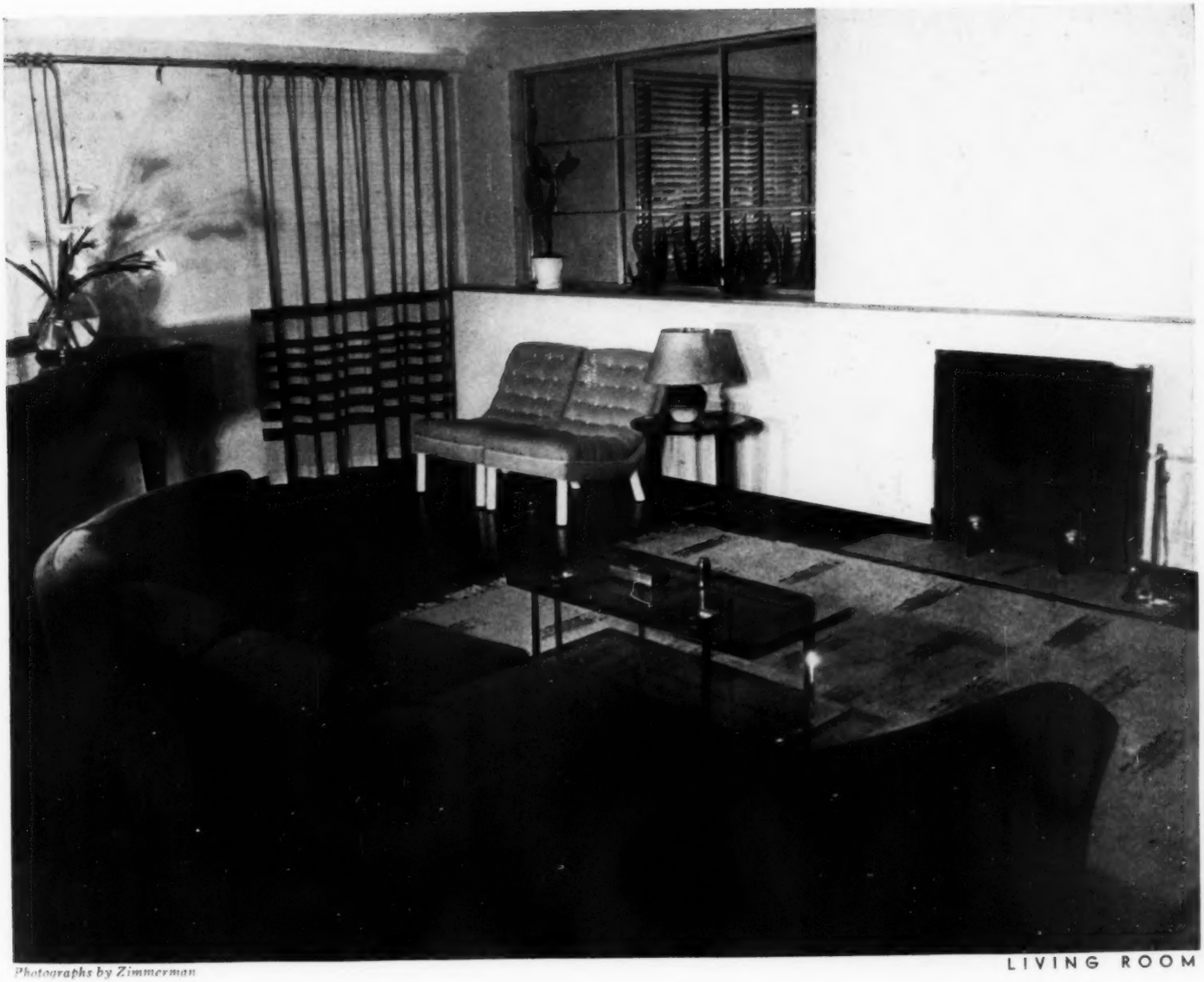


REMODELED HOUSE OF MARY SACHS **HARRISBURG, PENNSYLVANIA**

ELEANOR LEMAIRE
INTERIOR ARCHITECT

Practically all partitions on the main floor were removed. Steel girders were inserted to carry second floor joists. Two existing stairways were removed and one new stairway substituted. All window and door trim was removed. Fireplace in living room was remodeled and fireplace in solarium bricked up. One opening to solarium was enlarged, the other was closed up with blue glass window treatment. Lighting in living room and dining alcove comprises indirect lighting troughs on walls, recessed direct lights and suspended indirect fixtures on ceiling.

Living Room: Walls, white, yellow, gun metal blue; ceiling, white, yellow; curtains, handwoven material of citron yellow, white and gun metal blue; floor, black linoleum; furniture coverings, yellow, brown and blue.



Photographs by Zimmerman

LIVING ROOM

PLAN BEFORE RESTORATION

PLAN AFTER RESTORATION

DINING ROOM

Photographs by Zimmerman

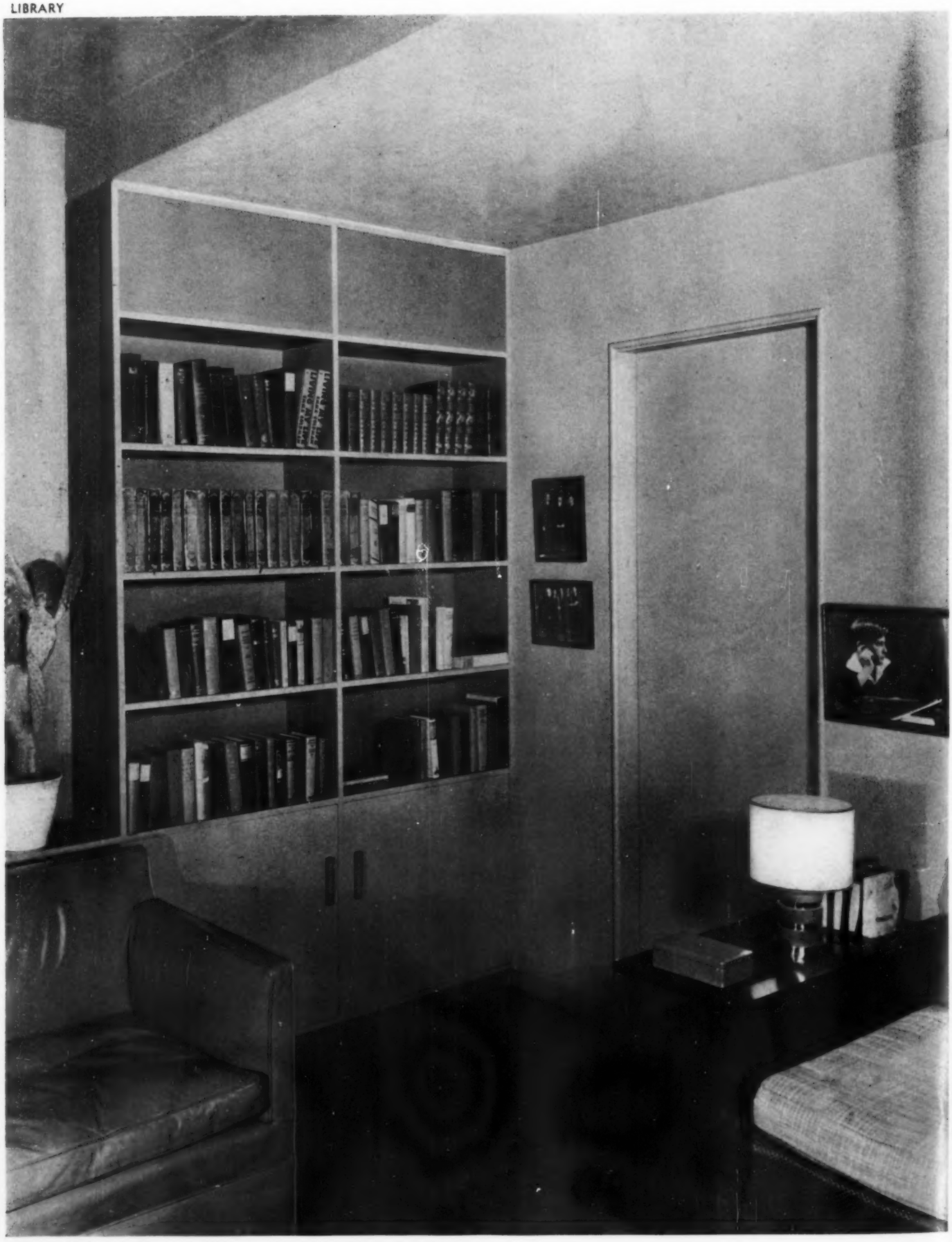
REMODELED HOUSE OF MARY SACHS — HARRISBURG, PENNSYLVANIA

ELEANOR LEMAIRE
INTERIOR ARCHITECT

Dining Room: Gun metal blue Venetian blinds in bay window. Curtains, yellow; gun metal blue and white at other windows; furniture upholstered in eggshell white and citron yellow leather, and gun metal blue material with red, white and turquoise stripes; floor, black linoleum; walls, white and yellow; gun metal door to kitchen.

Solarium: Walls and ceiling, white; floor, black; Venetian blinds, white with blue tapes; chairs, chromium with red and blue leather upholstery.

LIBRARY



ELEANOR LEMAIRE
INTERIOR ARCHITECT

Library: Walls, brown and henna red; carpet, brown and henna red; curtains, brown-beige and henna, handwoven; furniture, walnut, upholstered in brown-beige, henna red on couch and chair; chairs, two-tone jade green leather upholstery.

Bedroom: Walls, pink-white and turquoise; ceiling, pink-white; floor, carpet in American Beauty red and platinum gray; curtains, handwoven of pink and American Beauty red; furniture, covered in two tones of pale and deep turquoise blue; bedspread, pink-white with deeper pink figure; furniture, Hollywood.

Photographs by Zimmerman

BEDROOM

Photographs by F. S. Lincoln

CENTRAL HEATING PLANT **WASHINGTON, D. C.**

UNITED ENGINEERS AND CONTRACTORS

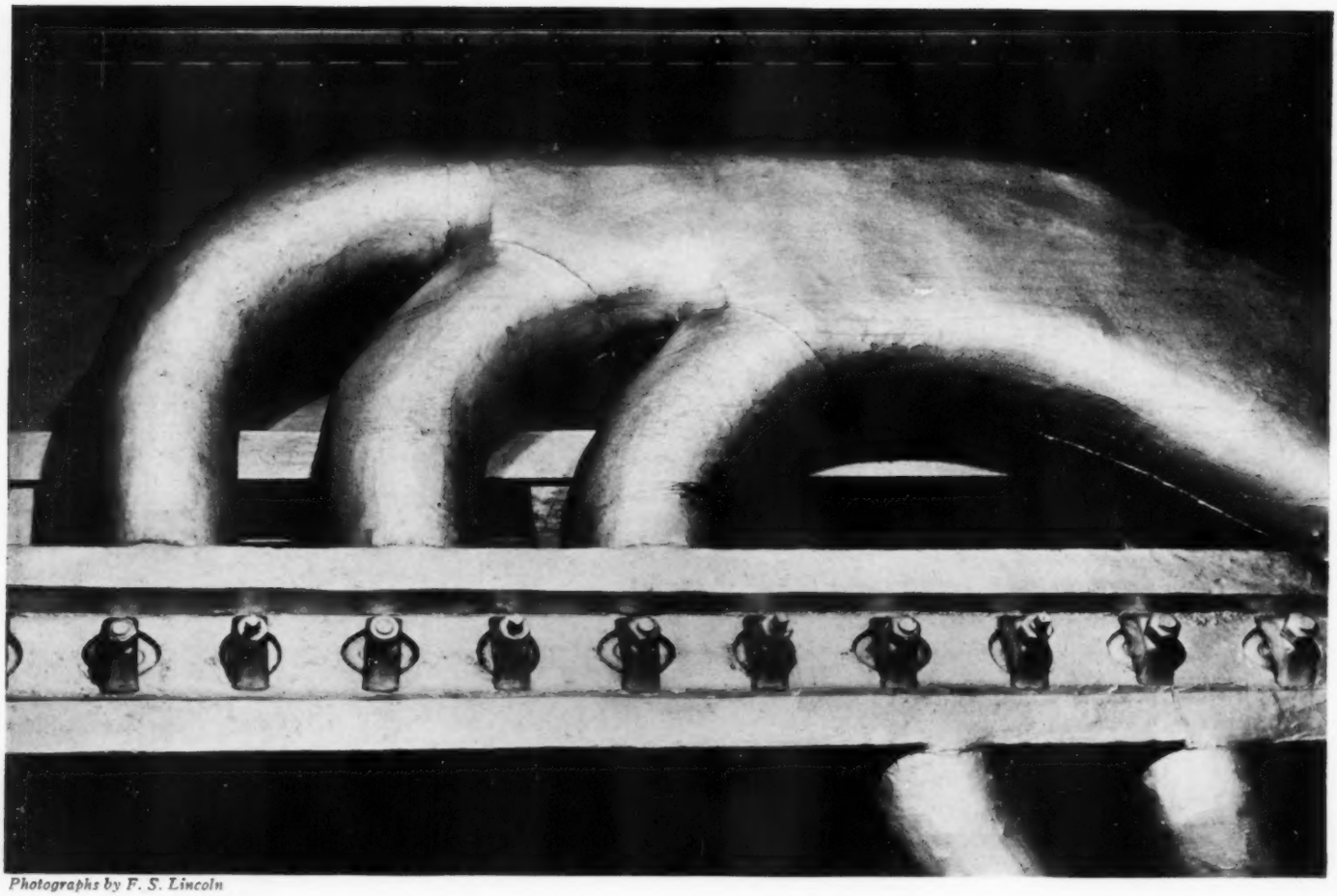
ARCHITECTS AND ENGINEERS

DETAIL OF
BRICKWORK

PAUL P. CRET

CONSULTING ARCHITECT

ENTRANCE DETAIL



Photographs by F. S. Lincoln

CENTRAL HEATING PLANT

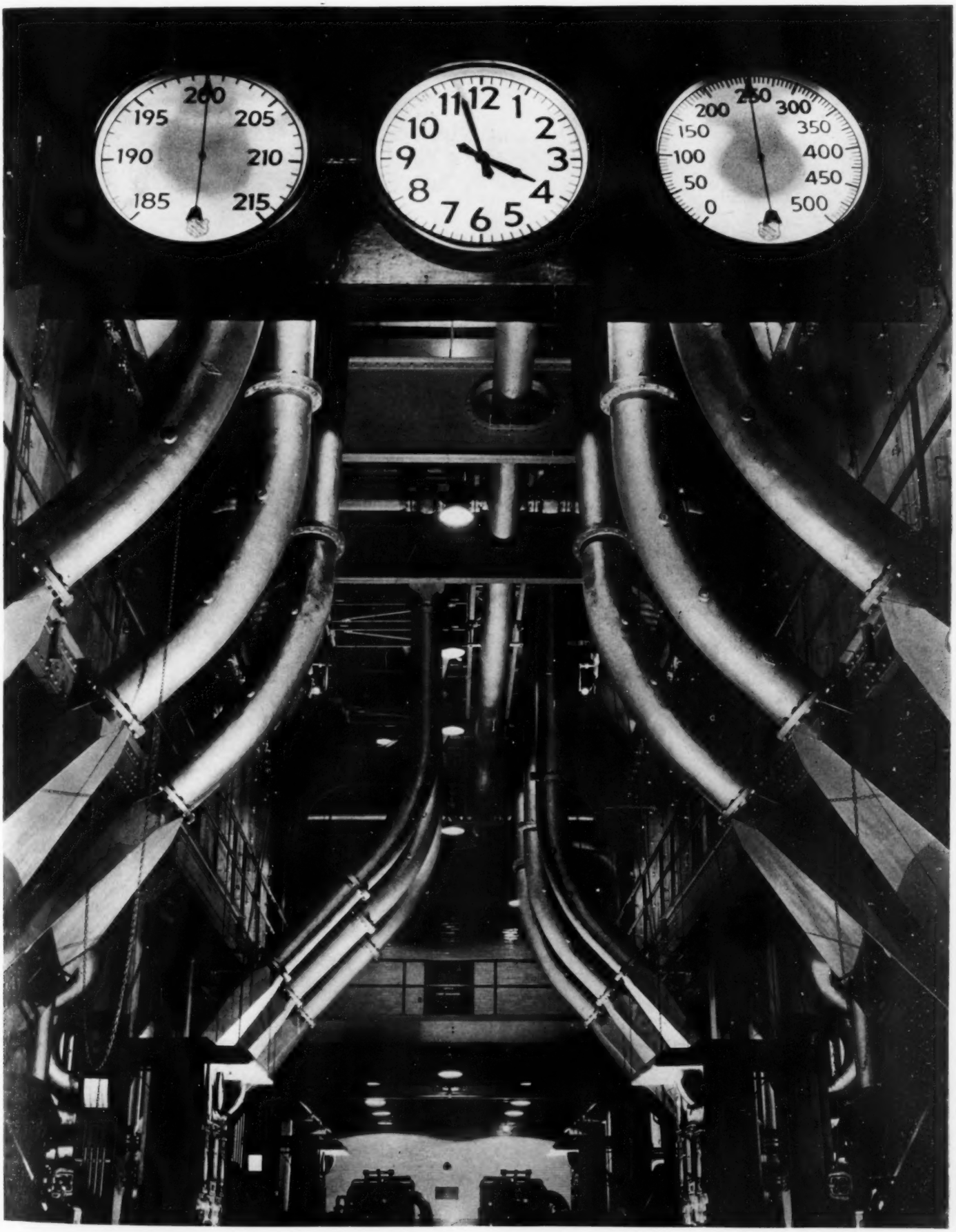
WASHINGTON, D. C.

UNITED ENGINEERS AND CONTRACTORS

ARCHITECTS AND ENGINEERS

PAUL P. CRET

CONSULTING ARCHITECT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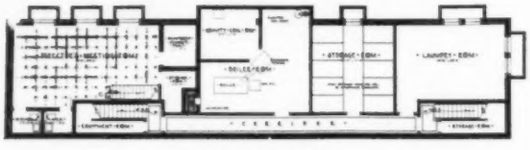
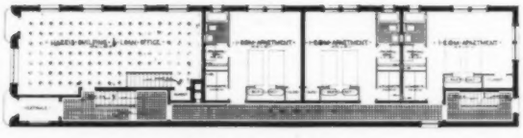
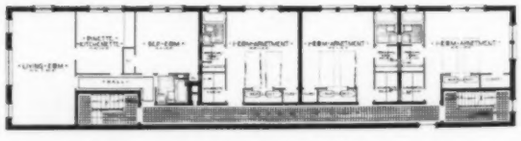


BASEMENT PLAN



FIRST FLOOR PLAN



SECOND FLOOR PLAN

THE HARRIS BUILDING AND LOAN BUILDING
HARRISBURG, PENNSYLVANIA

EDMUND GEORGE GOOD, JR.,
ARCHITECT

The building site is 26'-5" by 105'-0". The building is intended to house officers for a building and loan association. In addition, apartments are provided for rental. These apartments have their own entrance. The basement contains a directors' room and space for mechanical equipment. On the first floor there are offices and three apartments. The second and third floors are typical, each having three "economy" apartments and one three-room apartment. The building is of fire-resisting construction with the exception of the rear stairway. Exterior walls are of Indiana limestone and brick, backed with cinder blocks. All partitions separating apartments are 4" cinder blocks and, for soundproofing, are equipped with United States Gypsum spring clip sound insulation system applied on both sides. The spring clip system was also used on the ceilings. All floors are of concrete, covered with linoleum, excepting the office floors, which are of terrazzo with white metal strips.

THE SOUTHEASTERN OPTICAL BUILDING
RICHMOND, VIRGINIA

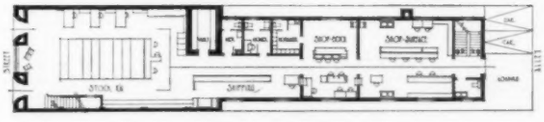
LEE, BALLOU & VANDERVOORT, INC.
ARCHITECTS

Location: The building is centrally located on one of the most important streets in the city; therefore, a factory type façade would not be in keeping with the location.

Purpose: Light manufacture; wholesale optical business.

Operation: In "Shop-Surface," surface or focus grinding is done on specially designed machinery. In "Shop-Bench," lenses are cut and shaped to exact size and mounted in spectacles. The Stock Room is used for storage and handling of all stock. All packages are wrapped and addressed in Shipping Area.
The second floor is used entirely for business administration except for one optical display room and a room for repairing the optical machinery. A hoist in the rear handles all machinery and bulk shipments. Most delivery to retail stores and optometrists is done by means of parcel post.

SECOND FLOOR PLAN



FIRST FLOOR PLAN

Construction: First floor, concrete; second floor and roof (built-up 20-year), wood. Façade, light buff brick in bands with gray cast stone trim, aluminum grilles and black brick. Building is air conditioned; coal stoker. Basement in rear is just large enough for heating and air conditioning equipment. Walls, plaster; floors, rock maple. Insulation, 4" Rockwool over roof area. Courts on sides of rear of building and windows on courts as required by building department. Most of the work is of such a nature as to require artificial light; lighting is indirect, except in shops. The entire building is protected aganst fire by an automatic dry sprinkler system.

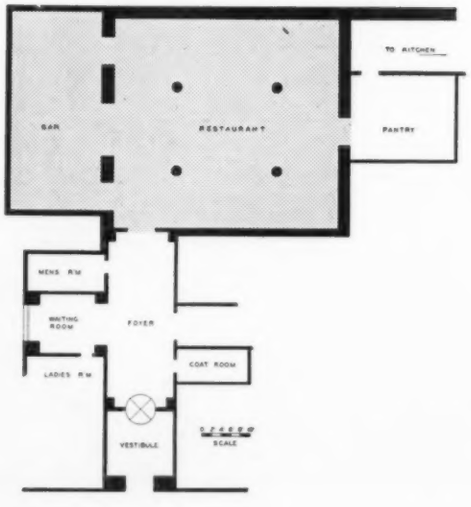
Cost: About 25¢ per cubic foot, including all fees; machinery and office equipment not included.

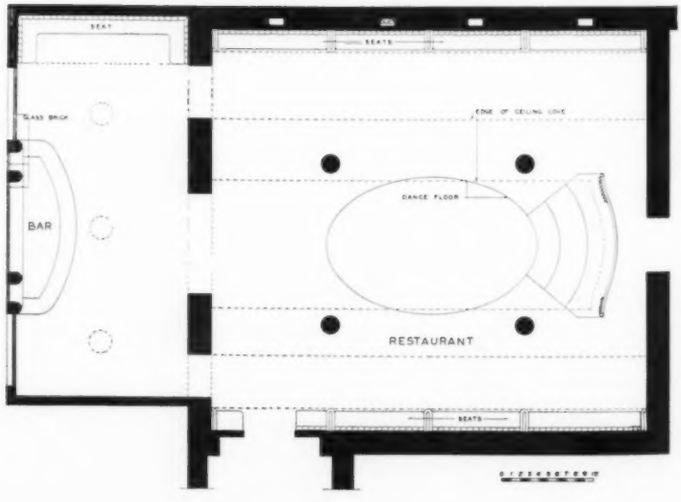
Photographs by Richard Garrison

CAFE LARUE, NEW YORK CITY

SCOTT AND TEEGEN, ARCHITECTS

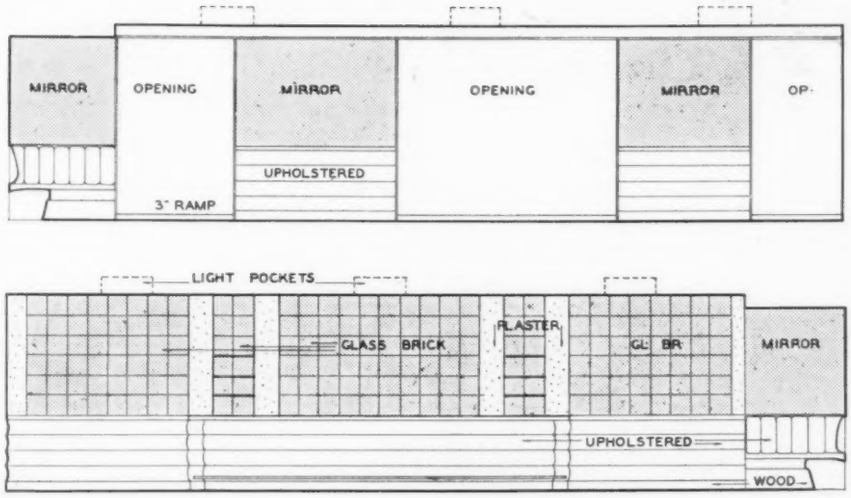
Divisions between "banquettes" are made of 1/2" etched glass set in wood frames and lighted by concealed lamps at the base. The wall decoration has red and black plumed birds on a background of gold leaves and vines. Decoration on columns and wall was designed by Lillian Gaertner Palmedo and is in gold and red with black outlines in oil on white oilcloth. The base of columns is in black linoleum. The ceiling consists of built-up coves which conceal the lights. The central part over the dance floor is painted white, the next level is yellow, then orange, and the level directly over the benches is in blue. The background for the orchestra is in blue cellophane and cotton fabric. Wood chairs are painted white and have dark blue chenille upholstery, except chairs around the dance floor which are of same pattern and material but are in orange color. The east end of room is faced entirely with mirrors.





THE BAR

This room was originally an open porch used for dining in summer only. The wall above the parapet height was built of Steuben glass block units. The piers that separate the glass panels are covered with white Fabrikoid, having horizontal metal bands. The front and back bars are old. The rounded ends were added and the outer face upholstered in red Fabrikoid with white welts. The mural at right was created by Gretl Urban. Table tops are of black Cafalite and have chrome metal bases. Curtains are white with red bands. The ceiling is painted Naples yellow, blending with yellow of mural. Ceiling lights are made up of two suspended circular sheets of glass. The light source is sunk in ceiling. A high wall of an adjoining building was painted yellow so that daylight reflects yellow light through the glass units.

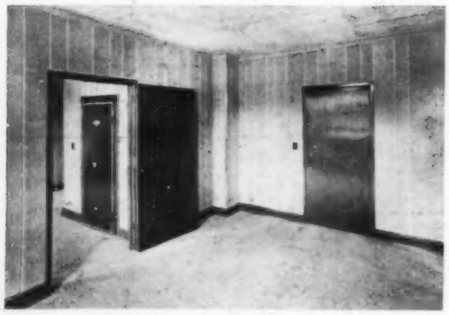


ELEVATIONS

MINNEAPOLIS ARMORY BUILDING — MINNEAPOLIS, MINNESOTA

Sixth Street Elevation and Sixth Avenue Side. Entrance to the Headhouse and also the public entrances to the Drill Hall balconies are from Sixth Street. Entrance and exit to the Truck Garage in basement are by ramps from Fifth and Sixth Avenues. There are also exits from the balconies on these two sides.

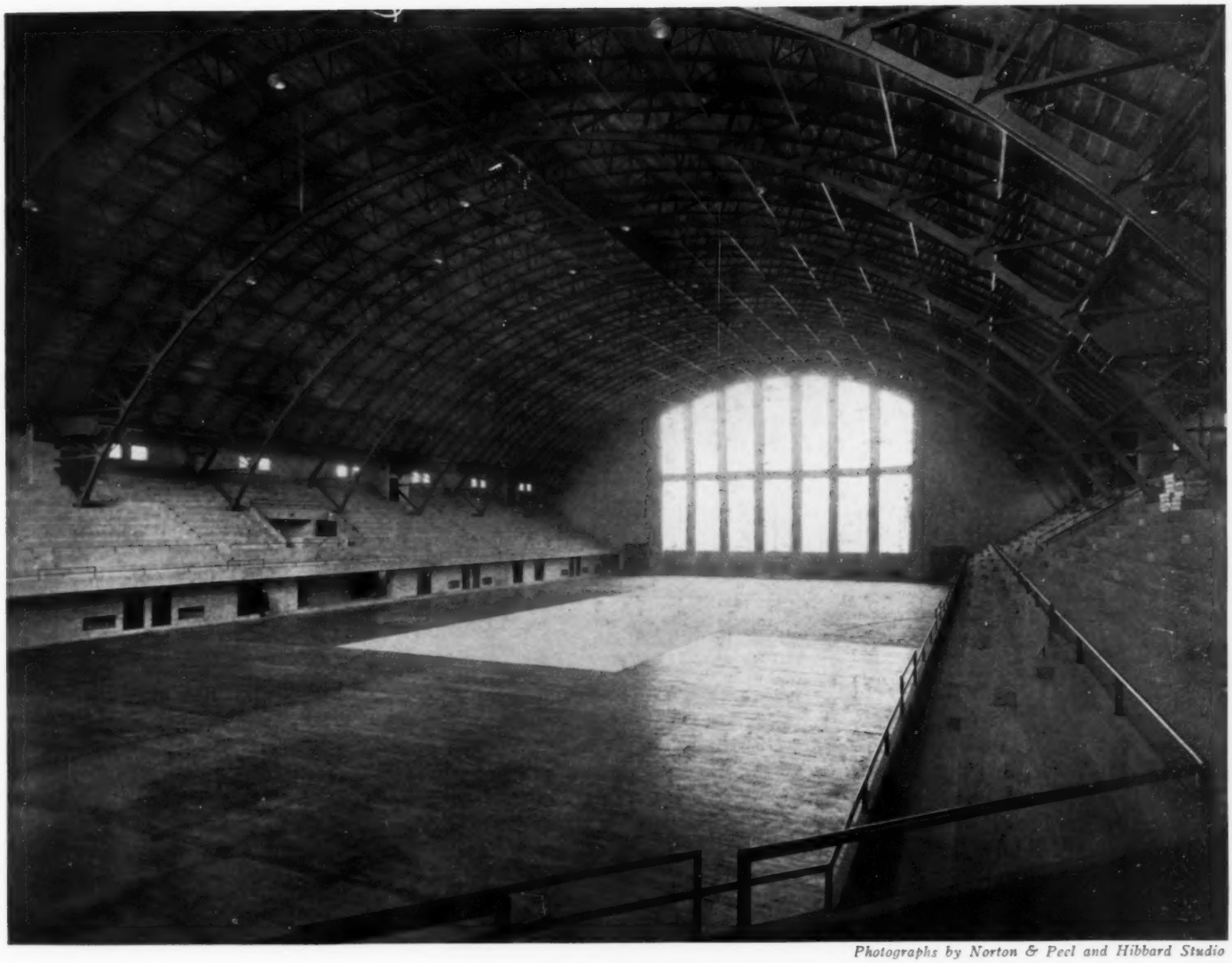
Drill Hall showing the concrete floor finished integral as poured, with wood floor in center for basketball, tennis, dancing, etc. The balconies are reinforced concrete with expansion joints. All steelwork of the Drill Hall roof was assembled on the drill floor and erected with derricks set up on the floor. Steel erection began two weeks after the drill floor was poured and finished.



OFFICE INTERIOR

Typical Office Interior in the Headhouse or Office Building portion of the Armory. "Smooth Ceilings" System of all flat ceiling floor construction. No beams, drop panels or column caps. The columns are uniform diameter from floor to ceiling. Plywood forms were used, followed by light rubbing with carborundum. The ceilings are left in natural concrete. Floor slab, 6 inches.

Truck and Ordnance Garage under Drill Hall. "Smooth Ceilings" System of all flat slab construction, columns spaced 30 feet on centers. No beams, drop panels or concrete caps on columns. A steel frame or column head fully inclosed within the depth of the slab takes the place of the drop panel and concrete cap. The floor is designed for 150 lb. per square foot live load and the finished slab is 12½ inches thick.



Photographs by Norton & Peel and Hibbard Studio

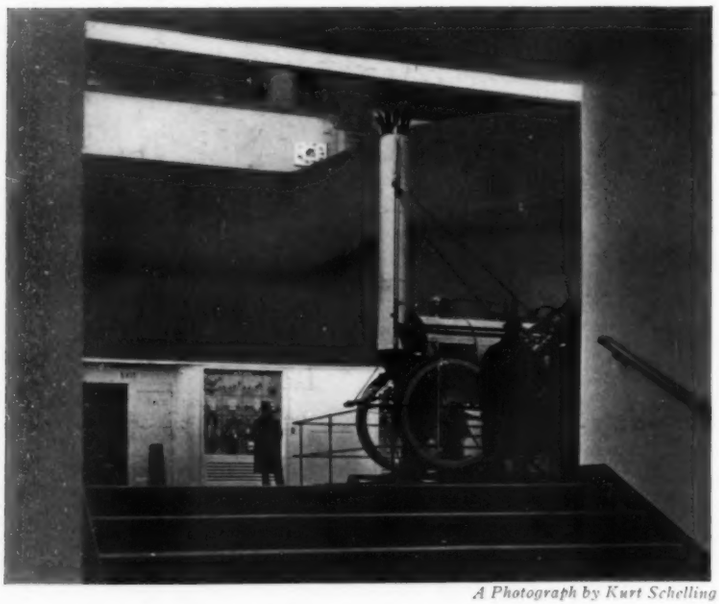
DRILL HALL

MAJOR P. C. BETTENBURG
ARCHITECT

WALTER H. WHEELER
CONSULTING ARCHITECT AND ENGINEER

ORDNANCE GARAGE

NEWS OF THE MONTH, MARCH 1936



A Photograph by Kurt Schelling

THE WHEELS GO ROUND AND AROUND

Opened to an invited group of Directors and their friends were the doors of the New York Museum of Science and Industry in its new home in Rockefeller Center. The museum, made possible by endowment of the late Henry R. Towne, represents a radical departure from traditional museum design. Here are no ancient exhibits gathering dust in dark halls, but a well-organized display of moving exhibits. Planned by Mr. Edward D. Stone, industrial designer, the new museum is arranged on varying levels. By careful disposition of the different elements, Mr. Stone has achieved an exhibit which flows together remarkably well. On the ground floor of the main hall is a series of moving models which illustrate all the essential principles of mechanics—piston, screw, ratchet, etc. These exhibits are brightly colored, and make their individual noises which blend into a busy and pleasant hum.

There is a wide use of moving pictures to illustrate static exhibits. In the department of electrodynamics a series of exhibits is arranged demonstrating basic principles of electricity, including many which may be operated by the visitor. Other sections are devoted to air, rail, and automobile-transport, communications, and to different manufacturing processes. Exhibits consist of two main classes: permanent and temporary.

SUPREME COURT RULES ON LIGHT VS. BEAUTY

Reflected light from the marble courtyards of the $11,000,000 Roman home of the Supreme Court gave several of the justices a headache. After a conference with the builders, heavy draperies were installed to reduce the glare. This left the court chamber too dark. A temporary ceiling of white cloth, indirectly lighted, now obscures the elaborate coffered ceiling and necessitated the removal of a magnificent chandelier. The ceiling will be redecorated in lighter colors during the summer recess. New bronze desk lamps have been installed; Justice Brandeis "dissenting," insisted on "an old black lamp with adjustable arm."

FORTHCOMING INDEX OF AMERICAN DESIGN

Hailed as the first effort to assemble a graphic history of native American arts, this Index of Design has been instigated by the Federal Art Project of WPA. Five hundred people will be required to cover basic source material in furniture, costume, textiles, floor coverings, glassware, silver, metalwork, ceramics, wood and stone carving, household utensils, etc.

In architecture, the project artists will study such building types as typical Colonial homes, small houses designed by "master-builder carpenters," schools and churches, commercial and public buildings, and miscellaneous buildings such as barns, mills, slave-houses.

The material will be reproduced in portfolio form, in black and white, in color, and by photography.

CENSUS OF CONSTRUCTION GETS UNDER WAY

Field work on the first Construction Census in this country began January 2. It is estimated that three months will be required to complete the field work: and the cooperation of contractors throughout the country is essential, according to G. J. Lawrence, Chief of the Census.

This Census will make available the basic data necessary to stabilize conditions in the industry. It will cover such data as the character of the establishments, types of work done by them, contracts received and work let, work performed (by type), employees and weekly pay roll, work performed in 1935 (by location), man-hours and pay roll at construction site.

BUT PRIMING CANNOT GO ON FOREVER

On January 31, five hundred members of the New York Building Congress sat down in Hotel Commodore's baroque ballroom to hear Senator Robert F. Wagner address them and the nation on "A National Policy on Public Housing." He defended his long advocacy of public housing as a primer of the business pump; "but priming cannot go on forever." Citing the usual statistics on "the shocking living conditions in this country," he mapped out an ambitious 10-year program of construction in which business and government would cooperate to build 10 million new homes. Constantly citing the English precedent, he recommended this division of the housing spoil:

25% TO GOVERNMENT

1. Low-cost housing for incomes of less than $1,500 a year. Government loans and subsidies to local authorities.

75% TO PRIVATE INDUSTRY

2. Relatively low-cost houses, owner- and operator-built, for the $1,500-$3,000 income class.
3. Moderate-priced multiple-family dwellings or large groups of individual houses for both sale or rental.

TO AID PRIVATE INDUSTRY HE SUGGESTED THE FOLLOWING:

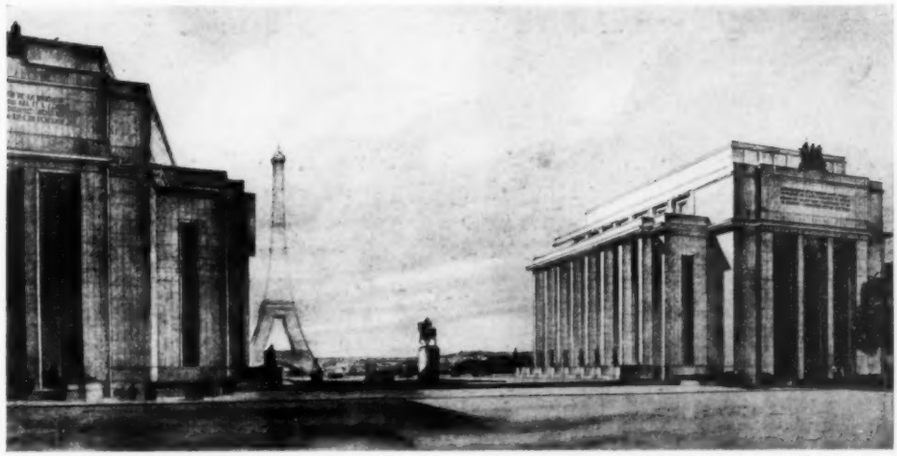
Widen area of Federal mortgage protection.

Small construction loans.

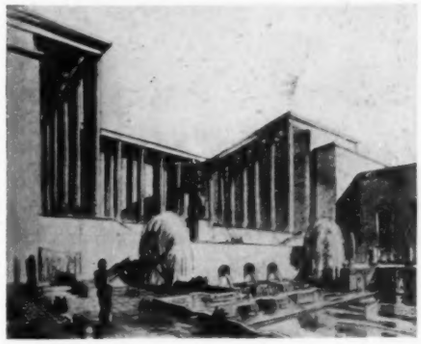
Expand National Mortgage Association ratio of debentures to capital funds from 12:1 to 24:1.

ENGINEERS CONVENE AT URBANA

Celebrating its 50th anniversary, the Illinois Society of Engineers convened at the University for a three-day session beginning January 29. Most of the papers presented celebrated the half-century of progress in the profession since the Society was formed — "Fifty Years of Water Works Progress," "Half a Century of Mechanical Filtration," "Five-Decade Review of Engineering Public Relations," etc.



PARIS PLANS A NEW TYPE EXPOSITION



Modern large-scale expositions too often have no relation to the city plan. They seldom have any permanent value; and their increasing economic importance has never been sufficiently exploited. In 1937 Paris will open an International Exposition which promises to set new criteria in exposition planning. 156 acres on both banks of the Seine, in the heart of Paris, have been set aside as the site. Site preparation involves two types of improvement: (1) *Redemption of blighted areas* occupied by the Military Supply Depot, railroad yards, government warehouses, old buildings on Avenue Rapp. (2) *Permanent construction*—landscaping two-mile stretch of left bank, street and bridge widening, reconstruction of old Trocadero, construction of two new museums of modern art, and new auditorium to replace Trocadero.

The Exposition has many quite novel features. Exhibits will be selected purely on a basis of merit. No charge will be made for "commercial concessions," all general buildings being erected at the expense of the Exposition. Exhibitors will only be charged for special construction and for general charges of light, heat, insurance, etc.

It is apparent that a much greater degree of control can be exercised over the Exposition. In fact, the general exposition plan, evolved by 78 groups of French architects, has already been established. General arrangement, mass and silhouette of the various buildings being thus determined, the architects of individual buildings or exhibits can execute the individual plans. Light, advertising, even sound effects, are subject to rigid control.

The exhibits are so grouped as to make a visit to the fair physically easier than at former expositions. Buildings will be arranged so that direct access from the street is provided. All existing improvements (including trees and planting) will be carefully incorporated into the general plan.

Fourteen main groups of exhibit material, subdivided into 75 classes, include: expression of thought, social problems, artistic and technical education, diffusion of artistic and technical knowledge (radio, newspapers, etc.), town planning and architecture,

graphic and plastic arts, etc.

Julian Clarence Levi of New York is Chairman of the Committee on Foreign Relations, A. I. A., which is cooperating with the Exposition authorities.

Wide World Photo

First Prize in the Rome Collaborative Competition went to the College of Architecture at Cornell University. Seen with the prize winner, "A Recreation Center in Natchez, Mississippi," are the judges. Left to right: Michael Rapuano, Joseph Kiselewski, Edgar Williams, Berry Falkner and Francis Scott Bradford.

THE ARCHITECTURE OF FUNK EVOLVES

On his recent tour of America, the famous Frenchman, LeCorbusier, pointed out how completely his plans for rebuilding Paris recognized modern realities. Besides schools, playgrounds, natatoria and the like, his modern housing projects included bomb- and gas-proof cellars. Moreover, his plans were very open, which not only admitted plenty of air and sunlight but also made them expensive targets from the air and allowed poison-gas fumes to blow away with a minimum damage to plant and animal life.

Now from England comes this report of the latest modern convenience incorporated at a housing project in Ashford, Middlesex. "The walls will be of concrete, 2 feet thick, and the roof is to be of steel and concrete. The dugout will be reached by a sloping tunnel and a steel door. Already the popular press is talking about secret experiments by the authorities in making dwelling houses proof against gas. We shall soon be brought around to the happy prepared state of mind when practice gas attacks will be accepted as a normal state of affairs. Meanwhile the architecture of funk evolves. That's Progress, that was!"

ARCHITECTURE REORGANIZED AT HARVARD

With the fall term of 1936, the instruction in architecture at Harvard will be divided into two sections:

1. An *undergraduate course* of general preparatory nature:
   Sciences — physics, economics, sociology.
   History of art and architecture.
   Drawing.
   Introduction to theory and practice of design.
2. A *graduate professional* course:
   Design.
   Social requirements.
   Engineering.
   Mechanical equipment.
   Professional practice.

It is not the intention to offer an undergraduate professional course at Harvard. The intention is, rather, to make a distinction between that part of the curriculum which is wholly professional in character and that which is regarded as preparatory to professional study, and to work out a more logical and effective relationship among these. The Harvard School will remain a Graduate School.

COMPETITIONS AND SCHOLARSHIPS: 1936-1937

SYRACUSE UNIVERSITY, DEPARTMENT OF ARCHITECTURE

One $300 and four $150 scholarships to be granted by competition, which will be in two fields—*drawing* and *preparatory school record*. Contestants must submit (before July 6, 1936) portfolio containing not more than 20 examples of their work in freehand and mechanical drawing. High school records will constitute second part of submission. Further details, Dean H. L. Butler, College of Fine Arts, Syracuse, N. Y.

OLD WHITE ART COLONY

Three prizes — $200 with two weeks' study, $50 with one week's study, $25 with one week's study —are being offered by Old White Art Colony for the most striking picture of The Greenbrier Hotel and surrounding Estate. Open to anyone in the United States or Canada; material must be submitted by June 1, 1936. Further details from Robert B. Parker, Greenbrier Hotel, White Sulphur Springs, W. Va.

AMERICAN INSTITUTE OF STEEL CONSTRUCTION

A first prize of $100 and a second prize of $50 will be awarded to the student of engineering or of architecture submitting the best design for a grade elimination over-pass. Requirements: applicants must be students of recognized technical schools in the United States. Preliminary review will be held April 15, 1936; design award will be made May 13, 1936. Further information from American Institute of Steel Construction, 200 Madison Avenue, New York City.

CHICAGO ARCHITECTURAL CLUB

Practical course in architecture free to all club members, covering all phases of office work from preliminary sketches to finished working drawings. Opened February 10, 1936.

ROTCH TRAVELLING SCHOLARSHIP

Preliminary examinations for the Rotch Scholarship will be held April 13. Applicants must register on or before April 1. Further information from C. H. Blackall, Secretary, Boston, Mass.

A.I.A. ASKS BUILDING INDUSTRY TO AVERT "JUNGLE LAW"

With a plea to all architects, contractors, manufacturers and labor to pull together, the Committee on Industrial Relations issued a broadside at "cut-throat" competition and suggested instead "co-operative" competition.

To this end, the Committee suggests that a building congress or construction league be organized in every community; these in turn will be members of a Construction League of the United States, and this Construction League will then act as a self-ordained body to save the construction industry from the "jungle law" of open competition.

AWARDED

TO JOHN RUSSELL POPE: A $10,000,000 ART GALLERY

Selection of Mr. Pope as architect for the new $10,000,000 art gallery in the national Capital has been made by the A. W. Mellon Educational and Charitable Trust. The structure, which must be completed by mid-year 1941, will house the $40,000,000 Mellon collection of art. This collection, it is planned, will act as a nucleus for a national gallery of outstanding works of art.

TO CLEVELAND ARCHITECTS: GREAT LAKES EXPOSITION STRUCTURES

To Walker and Weeks: A $100,000 bridge to connect the upper and lower levels of the Great Lakes Exposition at Cleveland, to be held June 27 to October 4. The same firm has also been awarded the contract for underpass beneath East 9th Street, to connect amusement zone with main exposition grounds.

To Anthony Ciresi went first prize for the exposition's main entrance in a competition open to architects of Cuyahoga County. The award was the contract for the entrance job.

An Electrical Building, 540 feet by 180 feet, is being designed by Hays and Simpson. Antonio De Nardo is the designer of the Transportation Building; Warner and Mitchell of the Horticultural Building.

PERSONALS

Mr. Stephen F. Voorhees, President of the American Institute of Architects, and of the firm of Voorhees, Gmelin and Walker, architects, of New York, has accepted an appointment to the Committee for Economic Recovery.

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The United States Texas Centennial Commission has engaged E. H. Burdick, veteran exhibit planner of A Century of Progress and the California Pacific Exposition, to "harmonize the Government and Negro buildings into a comprehensive, educational and pleasing ensemble."

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Appointment of Prof. Leopold Arnaud as Acting Dean of the School of Architecture of Columbia University has been announced by President Nicholas Murray Butler. Beginning in 1927, in University Extension in Columbia, he joined the faculty of the School of Architecture as instructor in 1932 and in 1935 was appointed assistant professor. He replaces a committee which has administered the School since Joseph Hudnut resigned as Dean last year to go to Harvard.

OBITUARIES

HARRY W. DYER, of New York City, died January 28 following an operation. Mr. Dyer, a graduate of M.I.T., was for 17 years a practicing architect. A number of successful inventions gradually drew him into the business world until, at his death, his patents covered a range from revolving doors and electric water coolers to automobile bumpers and children's wheeled toys.
Always deeply interested in art, Mr. Dyer was a competent etcher. He was a member of the Architectural League of New York, the Art Students League, and the Salmagundi Club.

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Widely known for his development of the "open-type plan" in school buildings, WILLIAM B. ITTNER, architect, of St. Louis, Mo., died January 26. Mr. Ittner had planned 430 buildings in 28 states, the majority of which were high school and college buildings. Long prominent in civic and professional circles, he was awarded an honorary degree by the University of Missouri in 1930.

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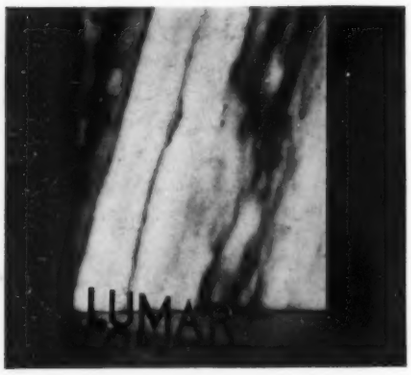
Died, on December 9, JOHN PARKINSON, a prominent architect on the West Coast. Life member of the American Institute of Architects, former member of the Los Angeles Municipal Art Commission, Mr. Parkinson's death ended a 46-year career in architecture, during which he designed a large number of commercial and public structures. Especially notable was his reconstruction of the Los Angeles Coliseum, of which he was the original designer.



"LUMAR*"

A NEW MARBLE PRODUCT

CREATED BY SCIENTIFIC RESEARCH

Because marble is a naturally occurring material the main applications of modern science have been in its production. Methods have been improved and efficiencies increased so that now marble is relatively cheaper than ever before. The Vermont Marble Company, feeling that it was strictly up to date in production methods, began several years ago a scientific study of the product itself. Such research work was quite new in the marble industry. This condition has existed because marble has served its purpose very well in general through centuries of use. One aim of the research sustained by the Vermont Marble Company is to ascertain in minute detail the structure and properties of every well-known type of marble and thus to enable the recommendation of the very best type of stone for a specific purpose. All the tools of modern science are being utilized in this work. The finest details of the crystalline and subcrystalline structure are under scrutiny; the physical and chemical properties are being measured in exactness and in full.

Another objective in this research is to discover ways and means to bring out the natural beauty of marble to a maximum degree. Here "natural" should be emphasized. In the past the plainer marbles have been stained and colored in order to increase variation and interest. The Greeks used polychromy to a large extent and it satisfied their sculpture and architecture. But the tinting of marble is easily overdone and is likely to yield garish unnatural effects. As is well known, the beauty of marble comes from the leisurely but powerful art of nature. It is extremely difficult, if not impossible, for man to heighten or to supplement this natural effect in a truly artistic manner.

Marble is of course a solid material; it has length, breadth, and thickness. But only two dimensions are normally available to the beholder, and hence even the most beautiful stone has much of its attractiveness sealed within it. As a result of some of the research of the Vermont Marble Company, a method has been evolved for revealing the internal beauty of marble. In a very real sense the third dimension of the solid stone has been disclosed. This result has been accomplished in an entirely natural way; garish, artificial effects are impossible.

This accomplishment is possible because a major constituent of all true marbles is crystalline calcium carbonate, or calcite. Pure calcite occurs in clear pellucid crystals that transmit light with great ease. Large calcite crystals, as transparent as glass, are used in optical instruments and are frequently called Iceland spar. White marble is a rigid, interlocked assembly of such clear crystals. The light-transmitting properties of a single calcite crystal vary with the direction of the incident beam. With multicrystalline material, complete analysis is extremely involved and its better understanding is the scientific basis for this new product. Stones of certain crystal structure are especially adaptable to transmit light and are partially transparent or translucent in relatively thick sections. This scientifically selected and specially processed marble has been called "Lumar."

This luminous architectural element provides beauty and light in an entirely new form. The light provides a brilliant warmth and aesthetic appeal that exceeds that of glass or other luminous mediums. The internal coloring may be brought out in every degree from a dull warm glow to a brilliant radiance. At this time, when the trend is away from ornamentation and in favor of color, the natural beauty of "Lumar" has general appeal.

A wide range of colors and types of "Lumar"

* Trade mark "Lumar" copyrighted and patent applied for. The major portion of the scientific work of the Vermont Marble Company is being carried on by an Industrial Fellowship (R. C. Briant, incumbent) at Mellon Institute of Industrial Research, Pittsburgh, Pa. Mr. Briant has cooperated in the preparation of this article. Professor George W. Bain, of Amherst College, as consulting geologist for the Vermont Marble Company, has also cooperated in the scientific basis of "Lumar" development.

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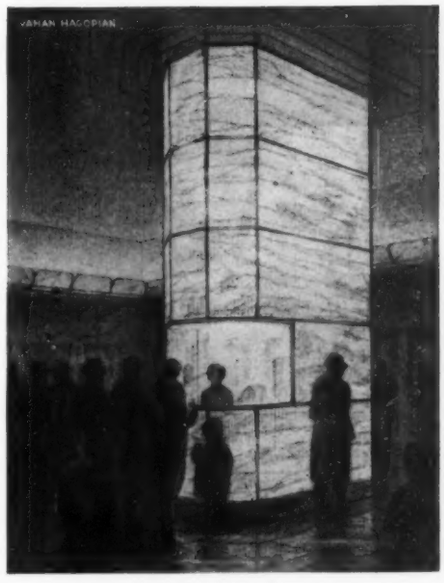


C

is available. Further possibilities of variation are offered through the use of colored lights and combinations of lights. "Lumar" has light diffusion characteristics equal to or superior to those of diffusing glasses. Spotty uneven illumination is virtually impossible, even with wide spacing of light sources.

For interior lighting installations, where extra brightness is required or where the average light intensity is high, thin one-fourth inch "Lumar" may be used. As it weighs only about three pounds per square foot, it is indicated where light weight is necessary. A range of translucencies are available in each type and color. Panels larger than two square feet total area or over two linear feet for one dimension are not recommended in one-fourth inch thickness. This particular thickness should find its greatest application in lighting fixtures of the panel, trough, or pan types, and flush illuminating areas for ceilings and walls. When used in indirect lighting installations, the highly efficient reflection qualities of "Lumar" are further enhanced by the beauty of the transmitted light.

Where medium-sized panels are needed, and where weight is unimportant, one-half inch thick "Lumar" is desirable. This marble is available in panels up to about four feet on a side or a total area of twelve square feet.

It must be emphasized that the glare commonly obtained with large illuminating units is absolutely absent; furthermore, aside from the markings in the stone, the surface density of the light is uniform. "Lumar" is characterized by extremely high light-diffusion factors.

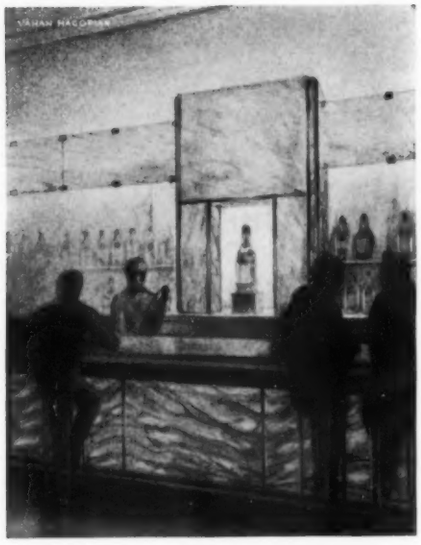
For very large or exposed panels, where weight is unimportant and considerable strength is necessary, three-quarter inch thick "Lumar" is advised. It is also of utility where the general light intensity is low and high surface

A SKETCH BY VAHAN HAGOPIAN SHOWING DECORATIVE USE OF LUMAR IN A STORE FRONT. The window height is lowered to its useful height, Lumar filling the space above. Its natural veining is a decoration at day, and its translucency illuminates the store interior. At night Lumar, lit from the leakage of the window reflectors, is an added feature to attract attention to the store.

B SKETCH BY VAHAN HAGOPIAN SHOWING USE OF LUMAR IN THE CONSTRUCTION OF A HIGH ALTAR. Lumar is used here for its translucent effect. The cross and the accompanying panels in the reredos are slabs of sand-engraved Lumar set up in the marble construction of the altar and reredos. Here it is suggested not to use regular low relief sculpture but to stylize the figures by using a drawing made with a sand-blasted groove.

C SKETCH BY VAHAN HAGOPIAN FOR LOBBY OF A MOTION PICTURE THEATER. Lumar is used here decoratively for the face of the ticket booth allowing it to glow and form a center motive of the composition. It is also used as a continuous cove lighting fixture, advantage being thus taken of the highly reflective quality of Lumar which here, in addition to acting as a reflector, allows this reflector to be luminous.

SKETCHES BY VAHAN HAGOPIAN FOR THE USE OF LUMAR IN INCLOSING THE OPENING ABOVE THE DOORS OF AN ENTRANCE LOBBY. LEFT: A view of the interior of the lobby illuminated by natural daylight through Lumar. RIGHT: The exterior by night when the translucent properties of Lumar transmit the artificial light of the interior and thus add to the decoration of the building.



SKETCH BY VAHAN HAGOPIAN FOR AN INTERIOR OF A BAR. Lumar is used here: A. For general illumination as a translucent shade for a continuous wall bracket. The light is allowed to escape freely and illuminate the walls which, in turn, indirectly light the room. B. Lumar is used decoratively only as a front to the bar itself, taking advantage of its translucent qualities.

brightness is not desired.

"Lumar" is available only in flat surfaces and hence it must be limited to paneled uses. It should find application as luminous pilasters, columns, posts, spandrels or frieze courses in theaters, banks, store fronts, restaurants, and a wide variety of commercial building exteriors. Suggested interior uses are radiant wall and ceiling panels, show cases, beams, and columns. In banks, drug stores, and bars, it will be used as free-standing screens, display table tops, window valances, and as bar panels, backs and tops.

Its fighting fixture possibilities are still more numerous. In theaters and churches it may serve in unusual trough, cove or cornice lights; in the home, as bathroom lighting panels, ceiling luminaires, lamp shades and lanterns. Its dignity is peculiarly adaptable to churches where it may be employed advantageously in windows and as warm altar and chancel panels. Ordinary electric bulbs are used in "Lumar" installations, and the wattage depends upon what the designer considers necessary, varying from a dull glow to a brilliant light. The general illumination intensity is important, however, higher wattages being required if adjacent lighting is brilliant. "Lumar" does not depend upon brilliance or color to attract attention, this characteristic being easily obtained at low intensities.

The approximate finished weight of "Lumar" ready for installation, is

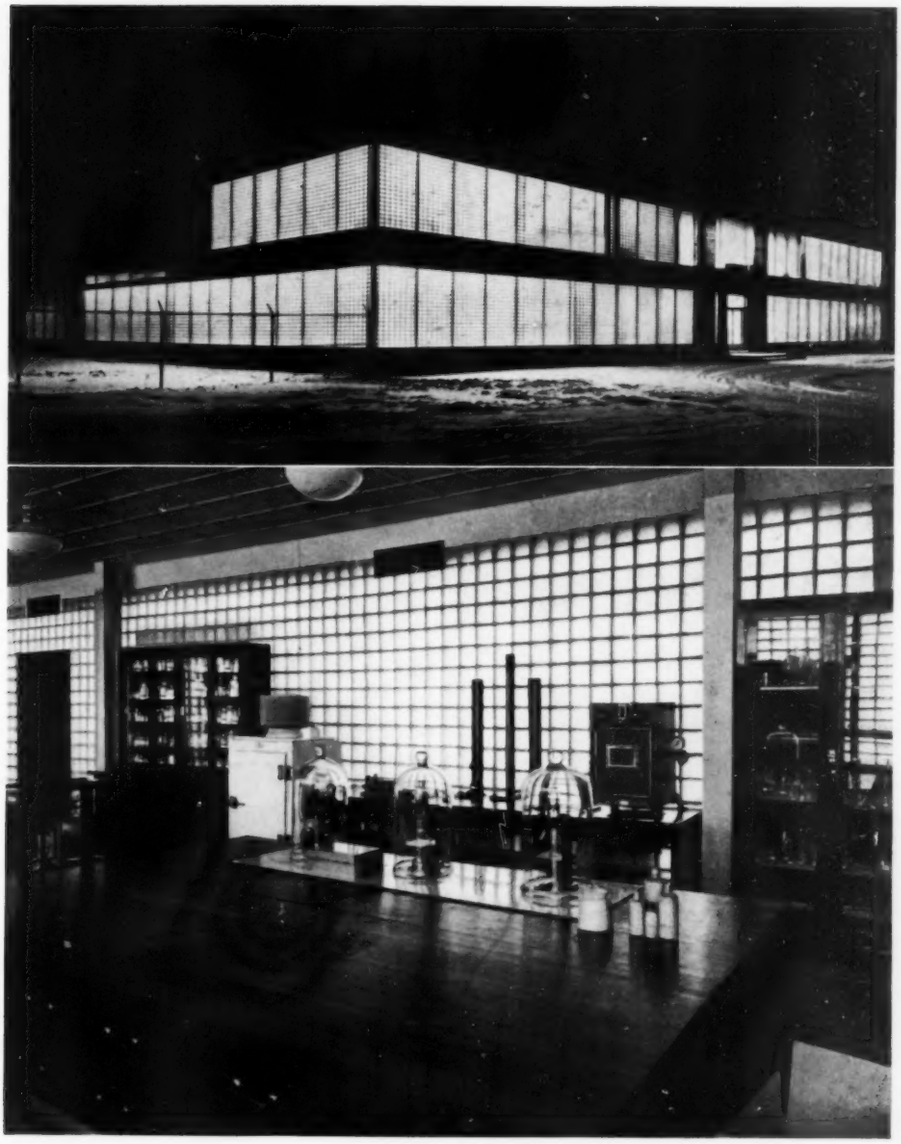
¼"—3½ lb. per square foot.
½"—7 lb. per square foot.
¾"—10½ lb. per square foot.

"Lumar" is usually supplied polished. Carved, lettered or ornamental features can be added to the ½" and ¾" product.

It is obvious that no hard and fast figures can be given for the amount of illumination required. On the basis of ½" "Lumar," the wattage indicated below will give adequate and pleasing results if adjacent lighting is somewhat subdued:

	PER SQUARE FOOT
"LUMAR YULE" (finely linea striations, golden brown markings)	3 watts
"LUMAR PAVONAZZO" (green clouds floating in a field of deep creamy yellow)	7 watts
"LUMAR GREEN VEIN" (Sunset colors, crossed by bands of soft green)	10 watts
"LUMAR BROCADILLO" (bands and bars of alternating green and yellow)	10 watts
"LUMAR ANTIQUE" (golden—combination of light and dark wavy effects with crystal clear areas of quartz)	15 watts
"LUMAR RED" (garnets and mandarin reds)	50 watts

TECHNICAL NEWS AND RESEARCH



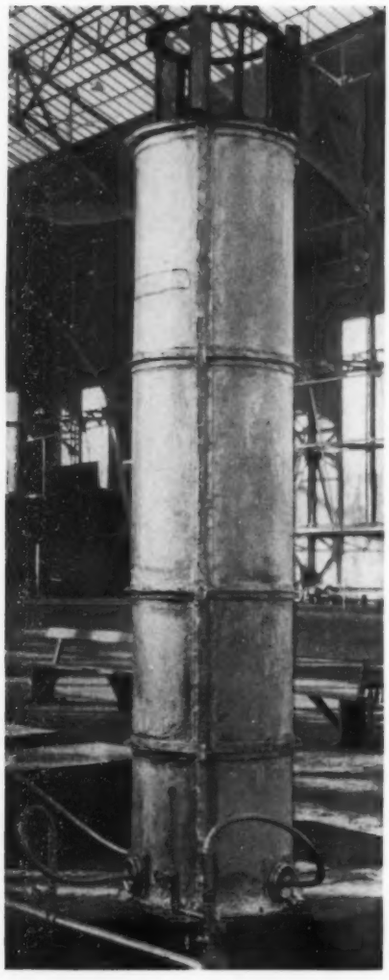
ALL-GLASS WINDOWLESS BUILDING FOR PACKAGING RESEARCH

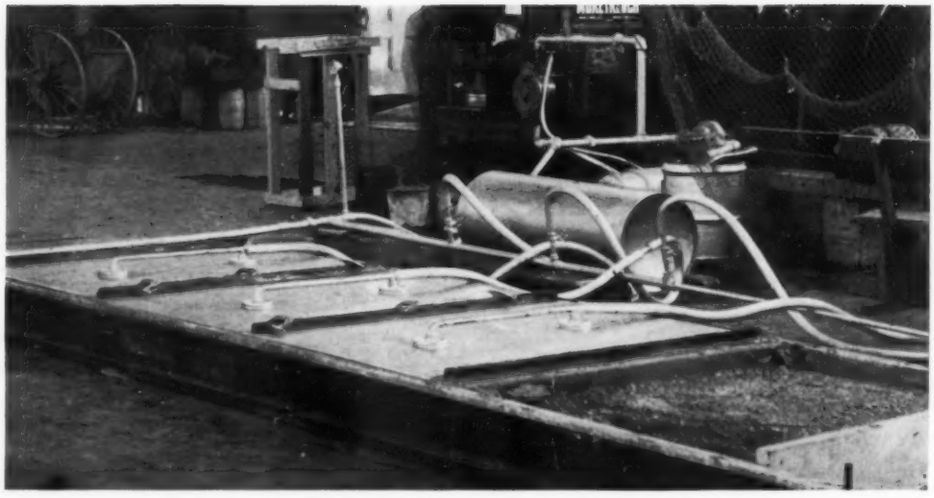
New laboratory of Owens-Illinois Glass Company, Packaging Research Division, in Toledo. Architects: Walker and Weeks.

This structure houses 5 laboratories, a large reference library, 7 private offices for research executives. Floor area: 20,000 square feet. Construction: 80,000 translucent Insulux hollow glass blocks laid by ordinary brick masons; total weight 150 tons. In compression tests made at Purdue University, the blocks withstood pressure of 72,500 pounds. (For additional information on Insulux, see Sweet's Catalog File 3/29.)

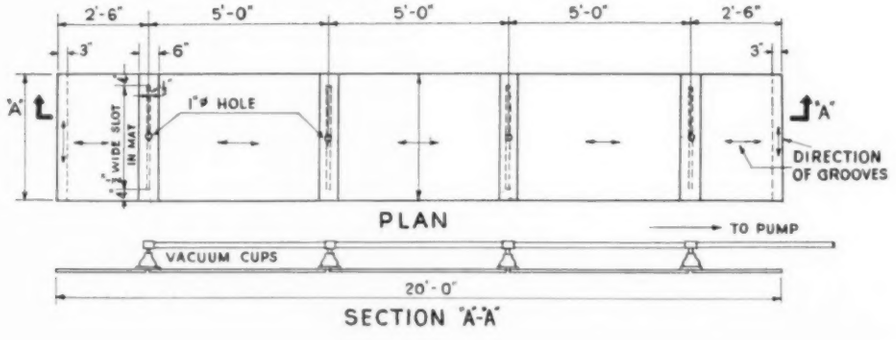
Atmospheric control: Being almost airtight, the building requires an air conditioning system capable of supplying completely the requirements of all occupants. Ordinary infiltration is entirely eliminated as a source of partial ventilation. Under maximum conditions the equipment furnishes 26,000 cubic feet of air a minute (12,000 fresh air, 14,000 recirculated). The flow of air comes through grilles at top of partitions and is returned at floor level without causing drafts; the air is cleaned of dust and foreign matter by passing through fibrous glass filters. Individual thermostat controls in each private office make possible a wide range of atmospheric conditions at any one time. . . . Solar heat penetration is 25% to 40% less through the partially vacuumized glass blocks, compared with equal areas of single-glazed steel sash for the mid-day period of 4 hours, according to the Purdue University tests. Ceilings are insulated with fibrous glass cotton, which also acts as a sound-deadener.

Light control: Although the building has no windows, exterior walls and interior partitions transmit as much as 86.5%, as little as 11.7%, of the light falling on outside surfaces, depending on selected block patterns. The light coming through partition in the centrally-located laboratory (shown above) is transmitted from the exterior through two other glass block walls.

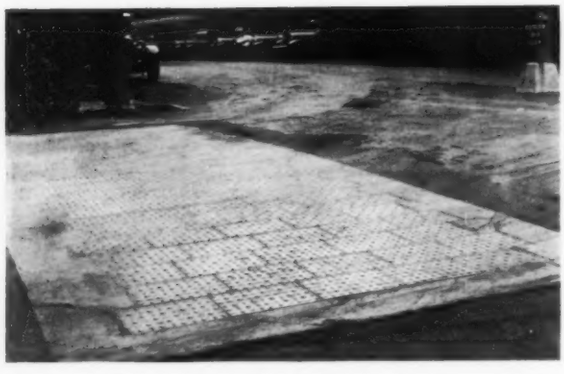




tests at Yale show that vacuumizing speeds up hardening of concrete columns and floors



bricks, wool, cotton, thread, yarn, fabrics . . . all are made of glass



steel protects concrete

MATERIALS, PARTS, SYSTEMS . . concrete, glass, steel plates, paint, antenna

VACUUM CONCRETE
promises speedier jobs, taller buildings

Process invented by Karl P. Billner, engineer (also developer of Aerocrete: see Sweet's Catalog File 3/58), 30 Rockefeller Plaza, New York. Company now being formed to lease equipment to contractors.

The weight of the atmosphere itself (about 14.7 pounds a square inch at sea level) is put to work in this new method which speeds up the hardening of concrete. Water required for a plastic mix is squeezed out, yielding a denser, stronger concrete than can be obtained with ordinary evaporation of the excess moisture not needed for hydration of the cement.

Method: Rubber or metal mats are placed over the slabs of freshly poured concrete. Pipes connect the mats at several points with a vacuum pump. As air and water are sucked out from under the mats, the internal pressure is decreased and the outside atmosphere begins to exert its force until a pressure of about 1,400 pounds a square foot is acting compressionally on the concrete. The concrete, still in a plastic state, is pressed into a solid composition, filling up all spaces from which the water is withdrawn. The compact molecular cohesion produced by the vacuum process gives increased strength to the concrete, which in turn reduces the likelihood of future shrinkage. . . . The more uniform internal structure thus obtained permits speedier construction. Vacuumizing is faster than the pouring, so the two processes are easily coordinated. Mats can be removed in 20 minutes and workman can walk over the newly laid concrete without leaving footmarks. Within two days roads can be used for passenger car traffic and within a week by heavy trucks.

Tests: According to the findings of Prof. Theodore Crane and Prof. Duff Abrams (Yale University), concrete treated by vacuum compression showed strengths 53% to 81% greater than those of untreated samples taken from the same batch of concrete. The increased density of the concrete minimizes the possibility of future shrinkage and consequent cracking, a major difficulty in concrete construction. . . . In the official tests, a reinforced concrete column, 25 inches in diameter and 10 feet in height, was demonstrated. A 1:2:4 mix, showing a slump of about 5 inches, was poured into forms and vacuumized; the forms were removed within one hour instead of the usual 24, and a column of satisfactory rigidity was revealed.

Finishes: Cement surfacings respond to vacuum drying even better than concrete; tests show that a stronger bond is obtained between the cement and the concrete. As soon as mats are removed the workmen have merely to smooth the surface of the cement mortar with steel trowels to obtain a glossy finish; they can do this without using kneeboards. Walls and ceilings can be similarly stuccoed or hand-finished.

Economics: Vacuum compression speeds up the construction of concrete buildings to the same rate at which steel structures are erected. The higher strength concrete permits designing engineers to use thinner floor slabs and columns of smaller cross-sectional area. Taller buildings become possible; according to the inventor, the practical limit for concrete construction may be raised from 15 stories to 20 stories. In road construction it is estimated that the present average cost will be lowered considerably through economy of materials; if the quantity of materials is not reduced, a road surface of much greater durability can be obtained.

GLASS FIBERS
for insulating, filtering, fireproofing

New process developed by Owens-Illinois Glass Company, Industrial Materials Division, at Newark, Ohio, plant. Manufacturing licenses issued to a glass factory in Dusseldorf, Germany, and to Corning Glass Works, Corning, N. Y.

A fibrous glass available in Europe has been produced by directing glass rods heated to a semi-liquid state onto revolving steel drums which draw the material into filaments by centrifugal force; speed of production has been limited and manufacturing costs have been high. By a secret process utilizing ordinary glass and steam, the Owens-Illinois technicians have succeeded in producing glass fibers at the rate of more than 260,000 feet a minute (3,000 miles an hour) in commercially practical quantities. . . . The American glass weighs only 1½ pounds a cubic foot, the European product 6 pounds. Three different forms are now available in integral fadeproof colors (white, blue, black, red).

Glass wool: A fluffy mass of fibers, 1 yard wide and 4 inches deep, emerges from furnaces on a conveyor and is cut to size by an automatic slicer. The packs, placed between walls and floors, form insulation that is fire, vermin and moisture proof and impervious to all acids except hydrofluoric.

Glass air filters: Fibers the size of broom straw are assembled into mats 2 inches thick and sprayed with a chemical adhesive. Properly encased, they are installed in warm air furnaces and ventilating system. (See "Dustop" in Sweet's Catalog File 26/44.)

Glass slivers: Fibers 20 times less in diameter than human hair are twisted into thread and yarn as insulation for electric wire and large cables. Stunts like knitted glass hats and woven glass rugs suggest the use of glass textiles to reduce fire hazards in theatres, restaurants, and ships at sea.

STEEL PAVING PLATES
for concrete floors, roads

Produced and marketed by Bethlehem Steel Co., Bethlehem, Pa.

Plates are designed for installation on the surface of concrete slabs to which they are anchored and with which they become an integral part.

Application: One type of plate is available for thoroughfares, such as tunnels and bridges, that carry extremely heavy continuous traffic. Another type finds use in warehouses, breweries, docks, and loading platforms where heavy goods are ordinarily conveyed on trucks with steel wheels of small diameter and small flange width, which are very hard on floor surfaces.

Installation: Both types are identical, except that the one for roadways is equipped with button-head studs, making it a non-skid plate. Sides are perpendicular to the surface, and crimped; additional anchorage is provided by studs which extend into the concrete. The fresh concrete fills slots in the top of the plate, providing additional bond between concrete and plate, at the same time increasing its non-skid surface. The floor-type plate has a smooth surface; long-shank anchorage studs, with flat heads, fasten through countersunk holes, making them flush with the top surface.

ENAMEL FINISH
resists acids, gas fumes

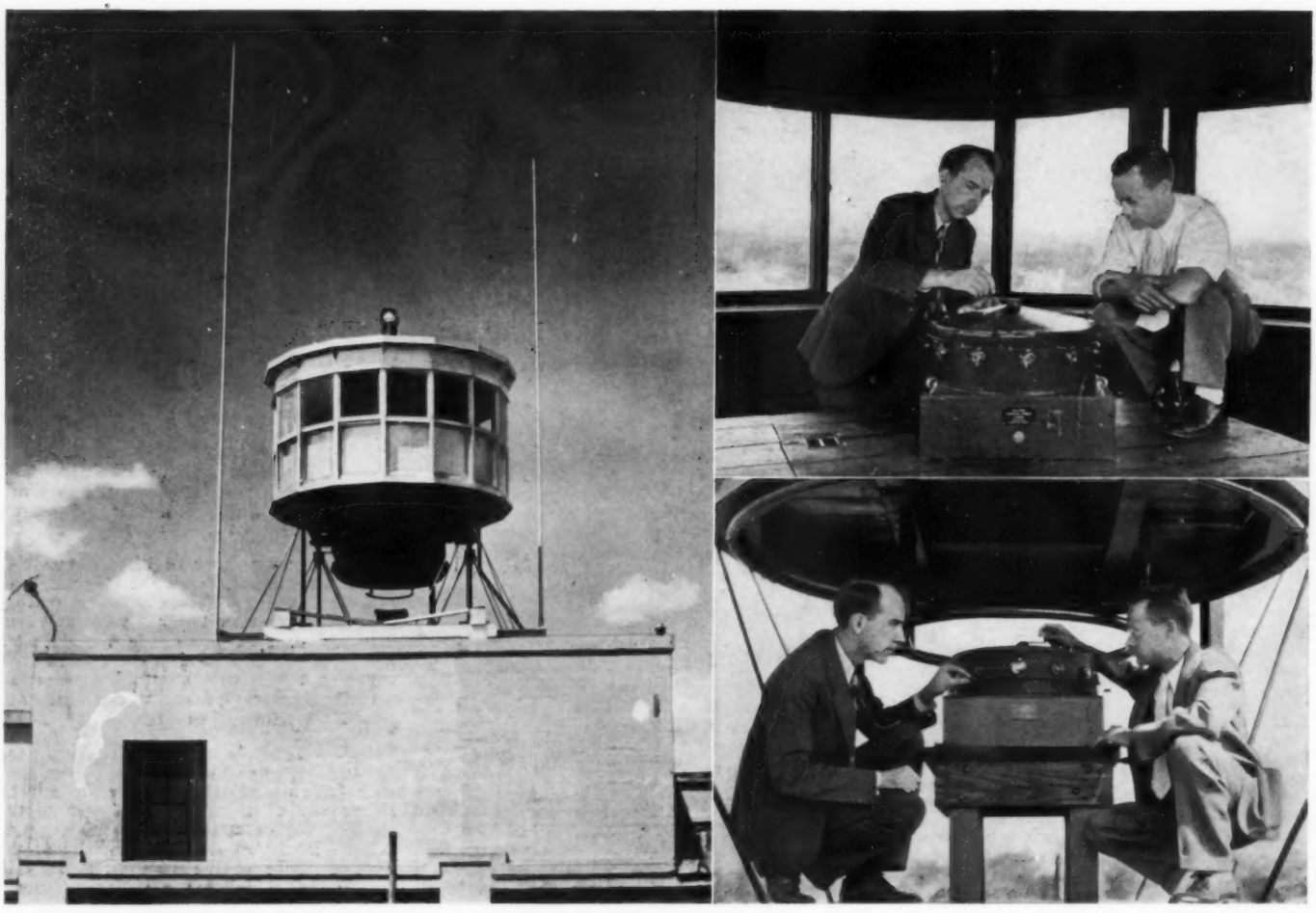
O'Brien Varnish Co., South Bend, Ind. (See Sweet's Catalog File 16/27.)

"Liquid Lite" is a quick-drying gloss enamel, which can be used as a coating for wood, concrete, brick, metal, plaster or wallboard. It is said to maintain its original color and luster much longer than ordinary enamels in the presence of deteriorating gases. It is intended for use in bakeries, dairies, ice cream plants and all industrial buildings where the presence of acid and fumes causes the premature breakdown or discoloration of paint.

MASTER ANTENNA SYSTEM
for multiple-set dwellings

Introduced by Technical Appliance Corp., 17 East 16 Street, New York. Installation by any experienced contractor or service man.

As many as 25 sets may be operated on a single aerial and downlead, taking the place of the usual jungle of individual aerials. The system comprises: (1) antenna unit connecting doublet antenna with (2) downlead transmission line, which in turn connects with individual (3) set coupler for each set to be operated on system.



behind steel and glass G-E engineers "shoot" power-disrupting lightning flashes

STRUCTURAL ANALYSIS . . . lightning, earthquakes, photo-elasticity

OBSERVATORY
built for study of lightning

General Electric Company, Pittsfield, Mass.

In this structure General Electric research engineers, directed by K. B. McEachron, expect to obtain new information on natural lightning, on the basis of which safeguards against lightning damage and interruption can be made in the transmission and distribution of light and power.

Observatory: The building is circular, 14 feet in diameter. It is constructed almost entirely of metal and glass, and is completely grounded to the steel framework of the building on which it stands. The exterior is painted an aluminum color, the interior surfaces a flat black to prevent reflections. . . . When a thunderstorm breaks in the vicinity the engineers step into a small room in the center of the observatory, made light-tight by dark curtains. They peer into the eyepiece of a 360-degree periscope which projects through the roof. Directly under the platform of the observatory is a specially designed high-speed camera with 12 lenses ready at a moment's notice to photograph the lighting strokes. The camera lenses, because of their necessary exposure, are protected against rain by a curtain of compressed air jets. . . . The photographs show C. J. Kettler, builder of camera, and W. L. Lloyd, Jr., lightning research engineer, preparing the apparatus for use.

Lightning studies: G-E research engineers have made many special investigations of natural and artificial lightning. Flashes of 10,000,000 volts have been artificially produced. Facts gathered during the past 12 years have been interpreted in the laboratory and translated into transmission and distribution equipment better able to withstand lightning voltage. . . . Steel buildings, it has been found, are the safest places when lightning flashes. The chance of being struck in the home is one in several million.

MODEL EARTHQUAKES
for testing building designs

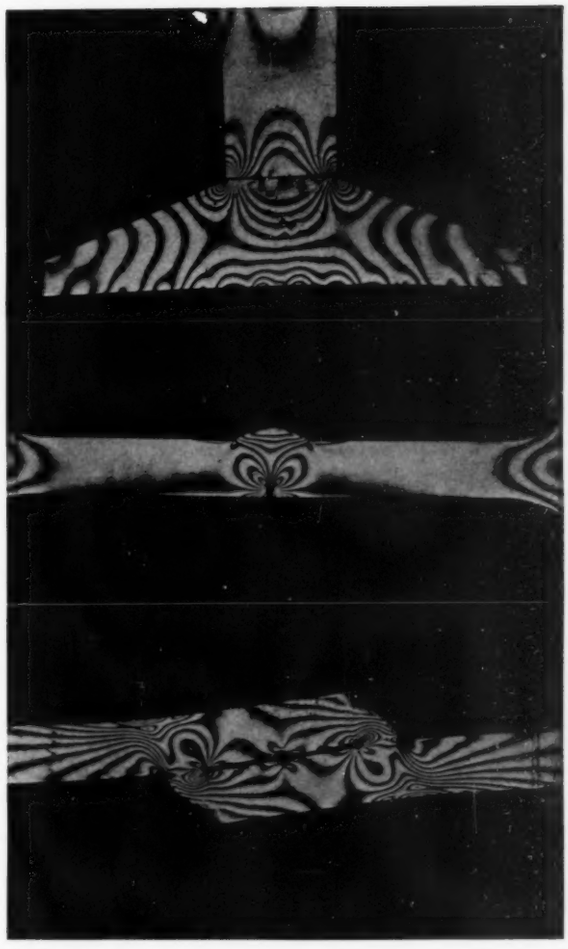
Earthquake reproducer designed by Arthur C. Ruge, Research Associate in Seismology, in consultation with Dr. Vannevar Bush, Vice-President and Dean of Engineering, Massachusetts Institute of Technology.

This shaking table for the first time makes it possible to duplicate in the laboratory the motions of destructive earthquakes directly from seismograph records. The new machine is used to study the destructive effects of earthquakes on buildings and other structures by means of scale models.

Operating mechanism: A "shadowgraph" (really an optical cam) is made from an actual seismogram by silhouetting the wavy line which represents the quake-motion. The white shadowgraph shown in the laboratory view is a seismogram of the 1933 earthquake at Long Beach, California. A pencil of light (an electric "eye") is the only connection between this device and the shaking table on which the scale model (in this case, an elevated water tank) is being tested. Beyond the model is the driving mechanism. The primary driving power is obtained from oil under pressure working against a piston connected to the platform, which is free to move in any direction. The electric analyzing device controls a valve which feeds the oil into the piston chamber. This valve transmits to the piston every detail of the earthquake waves as seen by the electric eye.

Special features: Heretofore shaking tables and devices have been capable only of simple

model earthquakes shake structural models



1

2

3

internal stresses are made transparent

back-and-forth motions. The new machine has no limitations as to how irregular an earthquake it can reproduce. All that is necessary to change from one quake motion to another is merely to pass a different shadowgraph in front of the electric eye. Although forces of over 2,000 pounds can be produced when necessary, the shaking table produces only the amount of force needed to make it follow the shadowgraph properly. Since the forces generated by the machine are exactly known, it is possible to observe by means of models how structures would be affected by a given earthquake. . . . Up to the present only a few quakes have been recorded within damaged areas, but information of engineering value is currently being gathered by the United States Coast and Geodetic Survey.

PHOTO-ELASTICITY

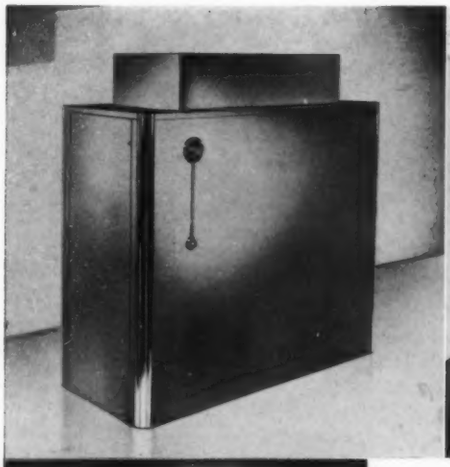
permits analysis of internal stresses

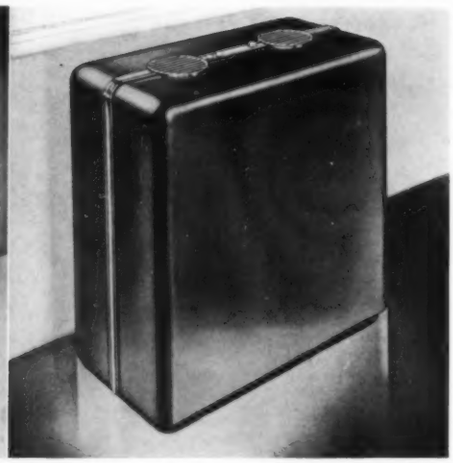
Stress analysis by means of polarization (see section, "Polarizing Glass," page 243) is being investigated at Massachusetts Institute of Technology, Department of Mechanical Engineering. This work is chiefly in the mechanical field; comparatively little attention has been paid to structures, primarily because structural stresses can usually be determined analytically with greater speed and precision than by any model method. The following report of these studies has been specially prepared for The Record by Robert W. Vose, instructor in photo-elasticity.

When stress is applied to practically any transparent material, changes occur in the speed of transmission and type of vibration of light passing through the material which are characteristic of the imposed stress. In engineering these phenomena are used, under the name of photo-elasticity, in determining the stresses in transparent models of structures, and by analogy in their prototypes.

Stress analysis: While in theory three-dimensional stress systems may be analyzed by the method, in practice only two-dimensional systems, as occur in flat plate models, can be handled. In such cases the stress condition at a given point may be completely described by the two "principal stresses" and their directions. Through the use of proper polarizing equipment light may be guided through the planes of these stresses, and their magnitudes and directions determined. . . . While progress is continually being made in the field, photo-elasticity has many limitations, and cannot be considered a "cure-all" for problems in engineering design. Perhaps its greatest use lies in the education of designers, since it presents visually facts which may otherwise appear only as abstruse mathematics.

Applications: From the problems which have been handled in the Photo-Elasticity Laboratories at the Massachusetts Institute of Technology the following have been selected as being of interest. . . . Figure 1 is the photo-elastic picture of a section of a wall and wall footing resting on soil pressure and loaded to simulate the weight of a structure above. Points of interest are the concentrations of stress at the lower corners of the wall, and the light soil pressures at the edges of the footing. . . . Figures 2and 3 represent sections taken through two different types of welded joints. The butt weld shown in Figure 2 illustrates a common defect—incomplete fusion—and the extreme stress concentrations accompanying it, while the lap joint shown in Figure 3 exhibits the eccentricity, bending, and concentration which unavoidably accompany this type of joint.





2 . . 1 Herman Nelson Corp. units

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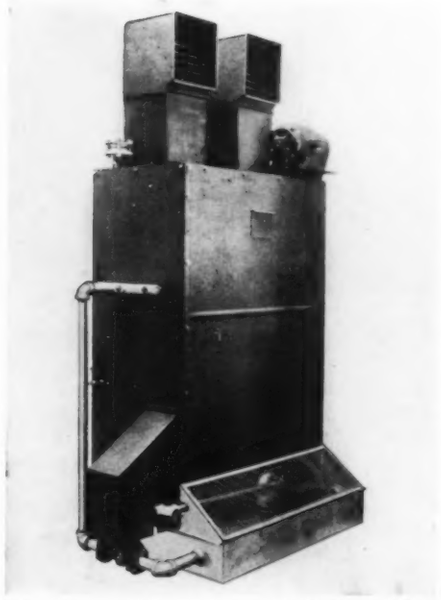
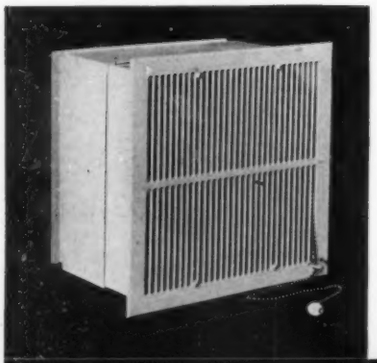


7 York Economizer



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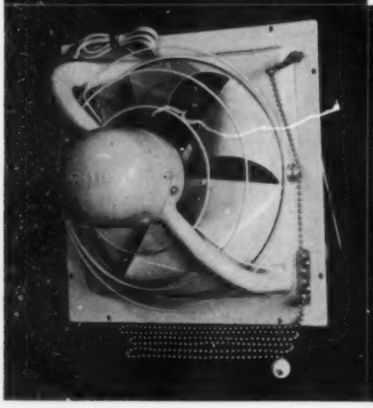
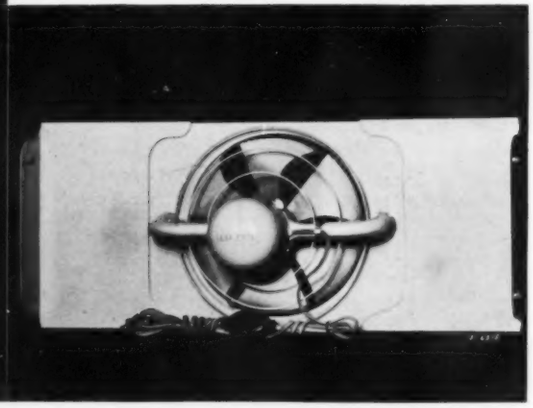
5 . . 6 Ilgette Kitchen Ventilators





AIR CONDITIONING
heating . . . . ventilating

AUTOMATIC EQUIPMENT
for residential, commercial fields

Introduced by The Herman Nelson Corporation, Air Conditioning Division, Moline, Ill.

Self-contained summer air conditioner: Cools, circulates, dehumidifies. . . . Illustration 1.

Oil-burning air conditioning furnace unit: Designed to provide air conditioning for comfort—heating, air motion, humidification and air cleansing with optional cooling and dehumidification. . . . See illustration 2.

Conversion oil-burner: Gun or pressure type. . . . Illustration 3.

KITCHEN VENTILATORS

Introduced by Ilg Electric Ventilating Co., 2850 N. Crawford Ave., Chicago. (See Sweet's Catalog File 26/62.)

Capacity—400 c.f.m., 45 watts. Speed of 1,550 r.p.m. Self-cooled, non-radio-interfering motor.

Built-in-the-wall Ilgette: When chain is pulled down, the fan unit is started and a weather-tight outer door is opened. . . . See illustration 4.

Window built-in Ilgette: Mounted in place of a pane of glass. Illustration 5.

Portable window Ilgette: Two adjustable panel sizes: 26" to 36" and 36" to 46". Larger sizes on order. . . . Illustration 6.

YORK ECONOMIZER

Produced by York Ice Machinery Corporation, York, Pa. (See Sweet's Catalog File 26/21.) Available in a number of standard factory-built models, with capacities ranging from 3 to 50 tons of refrigeration; larger sizes assembled to order.

This apparatus reduces the water consumption of air conditioning systems by about 99% depending on operating conditions. It is a combination forced draft cooling tower and refrigerant condenser, for indoor or outdoor installation. . . . See illustration 7.

TIMKEN GC BURNERS

Introduced by Timken Silent Automatic Co., Detroit.

Moving parts have been reduced to a minimum for pressure-type burners. Installation costs are lowered through use of standardized refractories. A "flame control" device insures control of the air supply. Five sizes are available, ranging from 510 to 1,090 square feet of equivalent direct radiation.

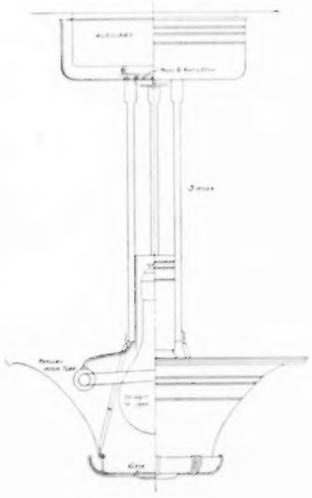
ZONOLITE AIR DUCTS

Introduced by Zonolite Corp., Detroit. Distribution: mesh ducts constructed by licensed sheet metal workers, insulation then applied by trained Zonolite employees.

Over a duct fashioned of a special weave wire mesh Zonolite insulation (a micaceous, non-ferrous granular material) is applied. This application makes a solid covering. No sound-absorbing liner is necessary as the Zonolite cover absorbs the noise through the mesh openings.

CONTROL OF LIGHT . . . . polarization, daylight lamps

masking light with glass



spectral balance equals daylight

POLARIZING GLASS provides new tool

Glass invented by Edwin H. Land and marketed under name of Polaroid for general commercial, industrial, and scientific use, by Land-Wheelright Laboratories, Inc., 168 Dartmouth Street, Boston. Now available only in optical qualities for use in scientific instruments and research.

Light has two distinguishable qualities—wave length and wave vibration. Technically, it has been easy to control wave lengths of of light to produce different colors, but a directional control of the wave vibrations has been possible only by means of cumbersome and expensive laboratory methods The commercial availability of Polaroid now puts the second quality of light under practical control, and opens up a wide range of unexplored possibilities in design.

Polarization principle: Light travels as a wave motion vibrating in all possible directions in planes at right angles to the direction of the beam. A polarizing crystal combs out the light waves so that only those vibrating in a single plane parallel with the crystalline structure are transmitted; vibrations inclined at small angles are transmitted partially; vibrations at right angles are stopped completely. If a plane-polarized beam of light is then directed at another polarizing crystal with its axis crosswise to that of the first, no light passes through; all vibrations have been combed out and no light whatsoever reaches the eye. . . . Iceland Spar, tourmaline, nicol prism are familiar polarizers; as natural crystal formations, they are small, inconvenient, expensive. Polaroid is relatively inexpensive and its synthetic flexibility of size permits a light beam of any diameter to be polarized. In appearance it is like clear colorless glass.

Making of Polaroid: A flexible film, only a few thousandths of an inch in thickness, is formed by suspending numerous minute artificial crystals in a cellulosic matrix. Each of these tiny crystals (1,000 billion needles of herapathite, a sulphate of iodoquinine, to a square inch of film) can polarize light, but since they are all embedded helter-skelter in the film, they must be straightened out so that they will lie with their axes parallel. This is done by stretching the film while still plastic. When all the billions of crystals have been properly orientated the film is optically equivalent to a single large polarizing crystal. The crystalline structure of Polaroid is so minute that it remains invisible at a microscopic magnification of 1,100. The film can be sandwiched into any glass or other film formation for practical use.

Commercial applications: The principal usefulness of Polaroid is the elimination of surface glare caused by reflected light. It is said to have already more than 800 probable uses. Some typical markets, other than the building field, are: (1) blocking out blinding glare from oncoming automobile headlights; (2) making and viewing three-dimensional movies in full color; (3) medical examination.

Apartment privacy: Windows can be equipped with Polaroid in rooms which face across courts or light wells. The view is normal except when the window is seen through another pane of Polaroid across the way, set to comb out the light in a different direction; such a window appears black. Objects between the two sheets of Polaroid remain as clearly visible as through ordinary window glass. (Of course, the windows have to remain closed; if one is opened, the advantages of privacy in the other are lost.)

Variable surface colors: Brilliant colors of every hue can be obtained for display signs, stage decoration, trick facades, by placing clear colorless cellophane between two sheets of Polaroid. The thickness of the cellophane itself is uniform, but the distances which light rays traverse vary with the thickness measured relative to the point of observation; this varying thickness as the observer passes by causes a change in the wave length of the reflected light, and consequently in its observable color. The net result is a constantly changing kaleidoscopic arrangement of colors as the observer moves or looks about. By varying the thickness of the colorless cellophane at desired points different combinations of reflected colors can be secured.

Stress analysis: Internal behavior of structural parts can be detected through studying the behavior of models made from transparent material (celluloid or transparent bakelite) while subjected to stresses and strains under polarized light. It is possible in this way to discover faulty products in course of manufacture and to make tests of complicated structures. . . . See section, "Photo-Elasticity," page 241.

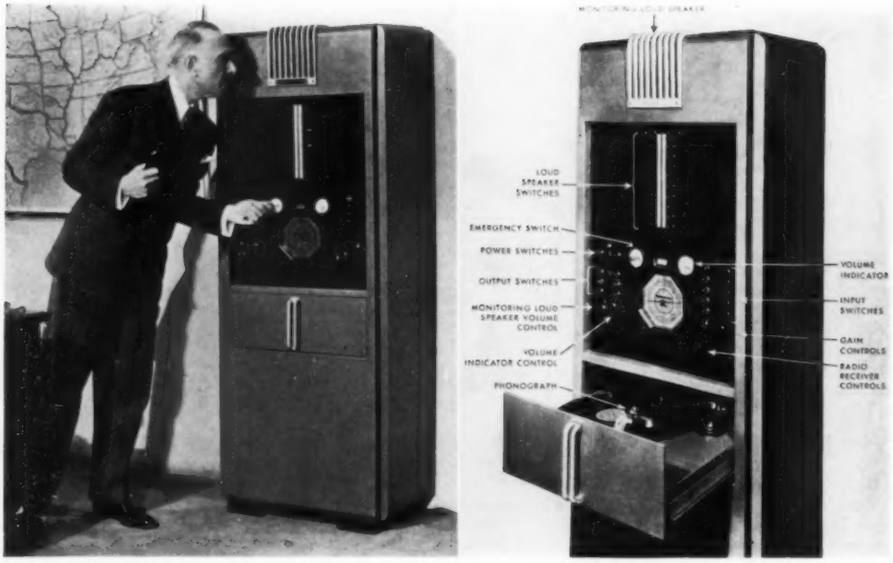
CIRCULAR MERCURY-INCANDESCENT LIGHT gives daylight quality

Produced by General Electric Vapor Lamp Co., Hoboken, N. J. Over-all cost compares favorably with other light sources.

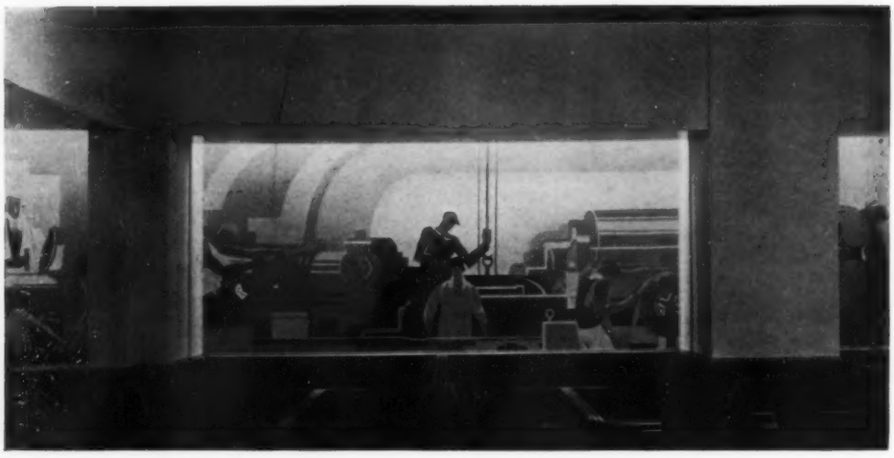
The light consists of a unit in which a circular mercury-vapor tube and an incandescent lamp are combined beneath one reflector to provide the desired spectral balance. It is recommended for industrial lighting applications involving accurate color differentiation or critical inspection.

Color control: The high blue and green emission characteristics of the mercury-vapor tube are blended with the excess red emission common to incandescent lamps in proportions which make for optimum visual characteristics. Undesirable excesses are not filtered out from the incandescent lamp, but instead deficiencies are supplied. Because this blending process is additive, the full light value of both tube and lamp are utilized. . . . As regularly equipped with a 33-inch mercury-vapor tube and a 200-watt incandescent lamp, the unit operates at 500 watts to supply light at a color-balance of 38.6% red, 35.5% green, 25.8% blue, as compared to afternoon sun of 37.7% red, 37.3% green, 25.0% blue.

Installation: The light unit itself contains the auxiliary for operating the mercury-vapor tube, and is installed and connected to the line in the same manner as the ordinary unit for incandescent light. It can also be installed inside specially designed fixtures, as shown by accompanying sketch.



loudspeakers become "talk-back" microphones



murals of washable rubber flooring

photomurals in Formica

decoration in porcelain enamel

CONTROL OF SOUND

PROGRAM SOUND SYSTEM

System designed by Bell Telephone Laboratories, introduced by Western Electric Company (see Sweet's Catalog File 29/19).

This system distributes programs from microphones, radio receivers, phonograph records. It is operated from a single cabinet.

"Talk-back": Sound may not only be sent out for reproduction over distant loudspeakers but the same loudspeakers may in turn be used as microphones for picking up sound for transmission back to the central point. This device provides a means for overhearing in a central office anything that may be happening at any loudspeaker location.

Applications: In schools—the principal may address all students from his office or listen to the work in any classroom. In stores—department heads may overhear transactions between sales persons and customers in any department. In hotels—for paging and for distributing music either from radio stations or from the hotel's own orchestra. In hospitals—for paging doctors and for permitting them to talk with the main office.

Variable features: One system arrangement provides for a single program, another for the choice of two simultaneous programs. In the first case, one amplifier is used and in the second, two. Switching facilities include as many as 60 keys for controlling loudspeaker or head-phone extensions. They are mounted in groups of 20 and may be wired so as to control each extension individually or several extensions in groups, as required. Besides the built-in microphone facilities, additional microphones may be located in offices or nearby halls or ballrooms. Controls are arranged so that announcements may be made over any one or any group of loudspeakers or, in an emergency, over all of them.

FURNISHINGS

RUBBER MURALS

Decorations in "Rubber Room" of Hotel Portage in Akron, Ohio. Painted in the original by Ivor Johns, artist, and muralized by Kenneth C. Welch, architect. Materials by Goodyear Tire & Rubber Co.

Duplicates of the originals were made in charcoal outline on heavy wrapping paper and used as patterns for separate pieces of colored rubber. These pieces were mounted on fiberboard with rubber cement before being erected on the walls.

BAKELITE LAMINATED PHOTOMURALS

Developed by Formica Insulation Co. (see Sweet's Catalog File 15/15).

Photographic inlays measuring up to 3 by 4 feet can be incorporated in Formica as a dense, hard, permanent sheet.

PORCELAIN ENAMEL SCULPTURE

Design by Russell Barnett Aitken, sculptor. Enamel fused on Armco ingot iron by W. A. Barrows Enamel Co., Cincinnati.

"Warrior Screen," an interpretation of an African devil dance, weighs 400 pounds, is 9 feet high and 12 feet wide.

SUBSIDIES FOR HOUSING

by ARTHUR C. HOLDEN

**Chairman, Technical Advisory Committee,
Housing Section of Welfare Council
of New York**

There are many varieties of subsidies applicable to housing. In general these may be divided into two classes, Direct and Indirect. Direct Subsidies imply those which require direct outlays in the form of grants in aid. Indirect Subsidies may also require outlays, but these are usually applied not to housing direct but to services or other expenditures which may indirectly benefit housing. On the other hand services or aids directly beneficial to the purpose of housing may be promoted, which may properly be designated as indirect subsidies inasmuch as they do not involve outlays or expenditures. No hard and fast classification is possible because the various types of subsidy shade off into one another through variations in purpose and method. In the United States considerations of source are equally important for the reason that the federal system limits the functions of the central government to powers delegated by the Constitution and reserves to the States and the people ultimate sovereignty with respect to other powers which in turn are defined and limited by the various state constitutions. Local powers emanate from the states and are subject to charter and regulation at the pleasure of the state governments. For this reason both the method and purpose of subsidies are dependent upon the source from which they originate.

To clarify the possible range it is simplest to set up a table, inadequate as it may be, and then to append a brief critique of the items with respect to source, method, and purpose.

CLASSIFICATION OF SUBSIDIES
particularly with respect to Housing

DIRECT SUBSIDIES:

1. Capital Subsidies—non-refundable payments to the capital account in consideration for the establishment of desired facilities.
   Example or precedents: A land grant to a railroad, subscription by government to a part of capital stock, or outright grant in aid.
2. Operating Subsidies—non-refundable periodic or contingent payments in consideration for the maintenance of desired services.
   Example or precedents: Annual subsidy from government for the maintenance of a necessary though unprofitable ferry; or for the carrying of mail; payments by government for part care of inmates in hospitals or other charitable institutions.
3. Leasehold Subsidies—the leasing of land or improved facilities at a rate less than market or economic rent in consideration for a benefit or public purpose.
   Example or precedents: Public lands leased at a nominal rental to a hospital, museum, school, or institution organized for a public purpose; or, as in the case of private enterprise, facilities leased to a church or specially favored party.

INDIRECT SUBSIDIES:

1. Virtual Subsidies—special or extra services of government rendered prior to or in addition to the services normally rendered.

   Example or precedents: Opening or paving of streets, or extension of rapid transit lines into outlying areas in advance of development.

2. Time Subsidies—favorable terms for delayed payments on assessments for benefit through public improvements, or with respect to taxes for current services.

   Example or precedents: Street paving costs carried by ten annual installments; bonds used to finance expenses for services in a current year thus transferring the burden of payment to later date and future user of property.

3. Immunity Subsidies—specific legal exemptions or immunities granted for a public purpose.

   Example or precedents: Moratoria respecting foreclosure proceedings or, stays against compliance with legal requirements as an incentive to low rents, assembly of property, and other public purposes.

4. Tax Subsidies—limitation of taxes imposed or exemptions from specific taxes granted for a public purpose.

   Example or precedents: Tax exemption for the securities of a municipal subdivision; limitation of taxation to land value only for low rental housing corporations; or blanket tax exemption extended to buildings erected during a shortage.

5. Credit Subsidies—special terms of credit, due to the security of governmental prerogative, offered as an aid to promote a public purpose. There are several distinct ways in which credit benefits may be extended:

   a. Governmental Borrowing: The Government may borrow at a lower rate than possible to private borrowers and, for the benefit of a desired public purpose, transfer its loan either (1) at the same rate, (2) at a lesser rate, or (3) at a small premium.

   Example or precedents: The so-called Dual Contracts made by the City of New York with two private rapid transit companies whereunder the city advanced a portion of the necessary capital and was required to meet interest charges even though the companies could not make good their part of the contract. Another instance is the recent RFC which as a special fiscal agent of the U. S. Government can command money at a low rate and make loans to industry or other agencies for the maintenance of necessary services.

   b. Contingent Liability: The government may through a fiscal agent, in order to induce the flow of private capital into desired channels or to assist in the remaking of damaged credit mechanism, arrange for the insurance of credit advances by private individuals or agencies and by the security given induce lower interest rates or more liberal advances of credit.

   Example or precedents: The FHA has been empowered to insure liberal mortgage loans for homebuilding and low rental housing projects—Insurance of savings deposits has also been provided for.

   c. The Origination of Balancing of Credit: The government may empower its fiscal agent to issue notes good as legal tender provided adequate means for their retirement and control are provided for, and that these notes may be applied for a public purpose.

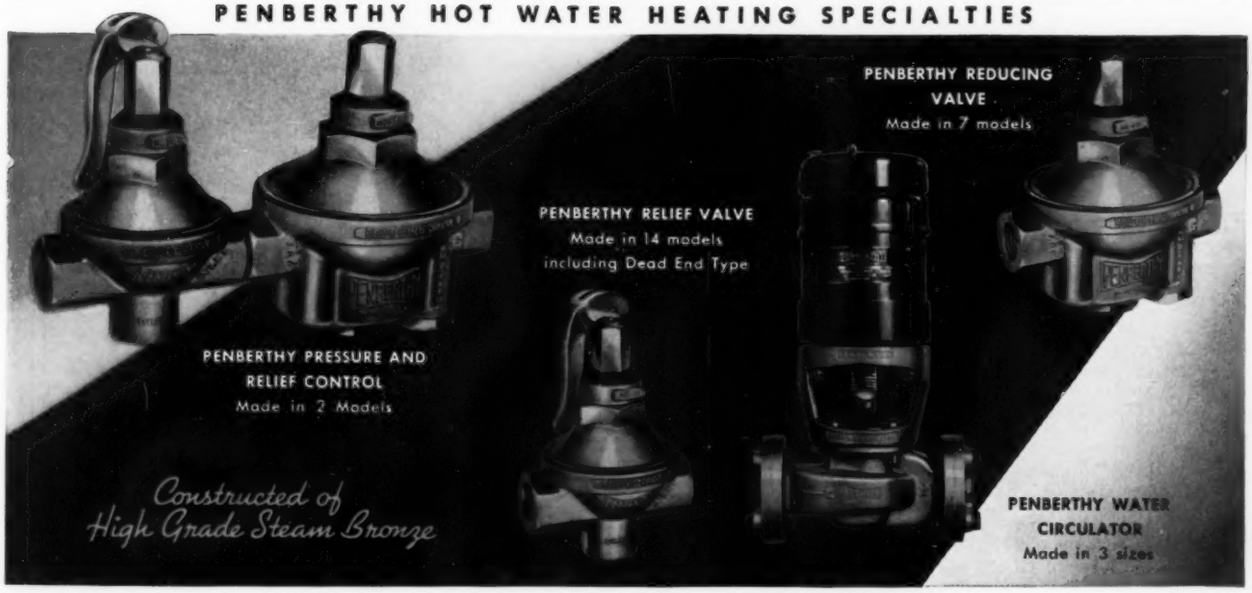
   Example and precedents: The Bank of England was chartered to raise a specific sum to finance a war with France and was in return given the monopoly of note issue and the guarantee of the proceeds from certain revenues for note retirement. The U. S. financed the Panama Canal by an issue of bonds against which the privilege of note issue was given. Although these bonds carried a rate of 2% they could have been sold at a still more nominal rate. The security for their retirement was the tolls on the Canal.

Thrifty

YOUR client gets a superior product at an attractive price when you specify one of the units shown above to keep his basement free from seepage water—or the specialties shown below to modernize his hot water heating plant. Thrifty clients particularly appreciate these thrifty products.

Penberthy Products are carried in stock by jobbers everywhere.

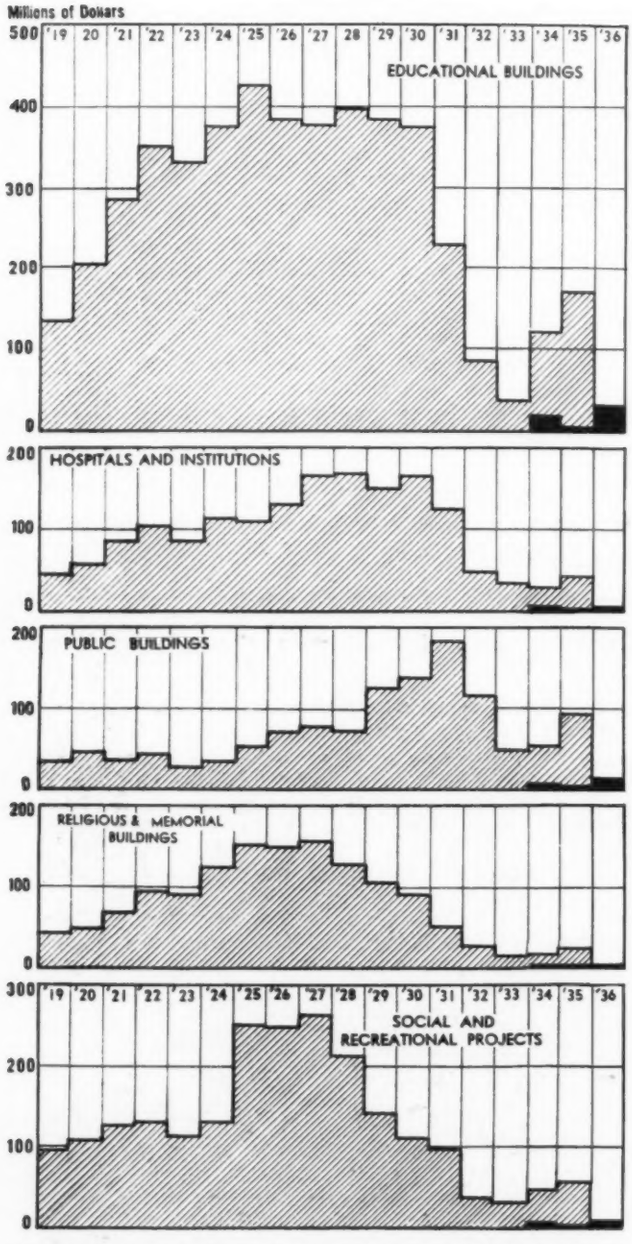
PENBERTHY HOT WATER HEATING SPECIALTIES



PENBERTHY INJECTOR COMPANY

Manufacturers of* QUALITY PRODUCTS *Since 1886
DETROIT, MICHIGAN • *Canadian Plant,* Windsor, Ont.

NEARBY OUTLOOK FOR PUBLIC AND INSTITUTIONAL BUILDING IMPROVES



CONTRACTS FOR PUBLIC AND INSTITUTIONAL BUILDING:

Bars denote annual totals. Black portions show January totals only.

By L. SETH SCHNITMAN, Chief Statistician

F. W. DODGE CORPORATION

For 1935 the total volume of public and institutional building operations undertaken in the 37 Eastern States amounted to $402,150,300. This was a gain of about 45 per cent over the total of $276,358,400 for 1934.

The largest quantitative gains over 1934 occurred in educational types and public buildings of federal, state and municipal agencies. Hospitals and institutions scored an advance of about $10,000,000, or more than 25 per cent; religious and memorial structures advanced by somewhat more than $5,000,000, or almost 30 per cent; while social and recreational facilities showed an increase of about $13,000,000, or almost 30 per cent.

For the first half of 1936 the total volume of public and institutional building in the 37 Eastern States should exceed by at least 40 per cent the total of only $135,600,400 reported for the first six months of 1935.

For January 1936 the volume of such construction totaled $65,974,500, which was more than four times the volume shown for January 1935. That such a rate of improvement cannot be maintained, however, is apparent from the records of contemplated building.

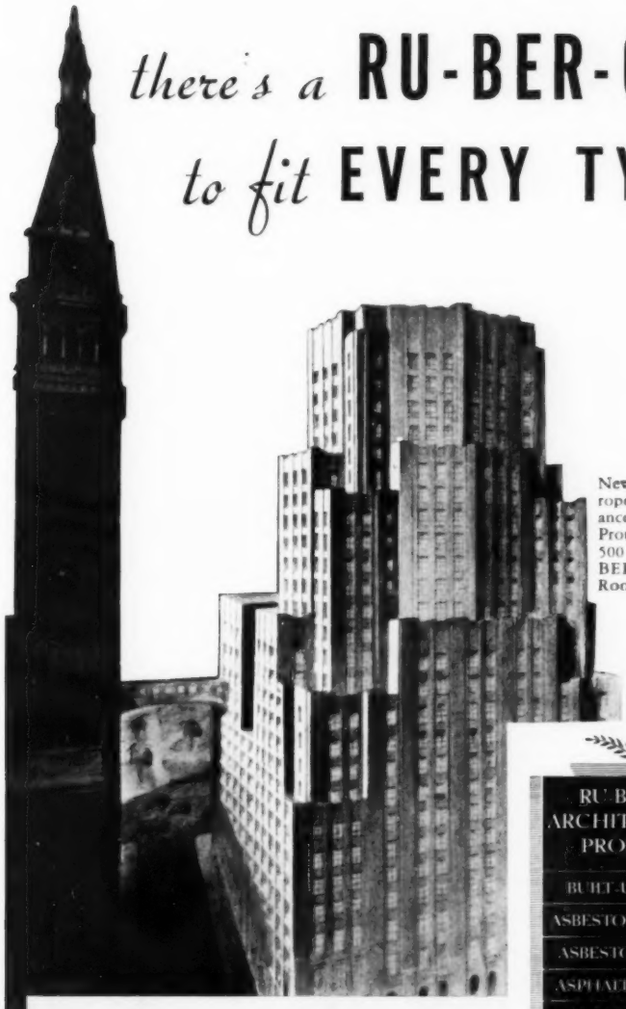
Large gains over January 1935 occurred in each branch; educational buildings scored the broadest improvement.

Gains were well distributed geographically.

Recent gains resulted chiefly from the acceleration in the Federal Works Program which is now nearing its maximum expansion.

Charts cover contracts in 37 Eastern States only.

there's a RU-BER-OID BUILT-UP ROOF *to fit* EVERY TYPE OF BUILDING!



New unit of the Metropolitan Life Insurance Co., New York. Protected with 38,500 square feet RU-BER-OID Built-up Roofing.

OVER 30 RU-BER-OID Built-up Roof Specifications, including multiple layers of asbestos, tarred, or asphalt felt, permit the selection of a roof which meets the conditions of climate, roof design, unusual wear, life of building, or proximity to fire hazard.

You can always specify RU-BER-OID Built-up Roofs with confidence. Impressive records of roofing service on public buildings and industrial plants the nation over attest to the uncompromising quality of RU-BER-OID Built-up Roofing Materials, and the engineering soundness of the specifications recommended.

Ruberoid invites your full investigation. Send for A.I.A. file 12-B-1.

The RUBEROID Co.
Executive Offices:
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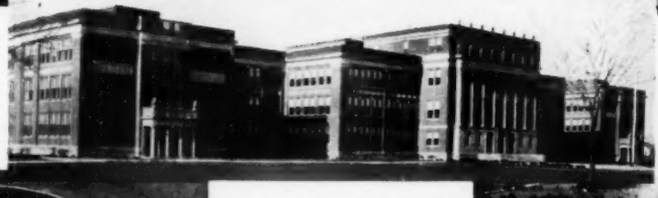
RU-BER-OID
ROOFING AND BUILDING PRODUCTS

RU-BER-OID ARCHITECTURAL PRODUCTS

- BUILT-UP ROOFS
- ASBESTOS SHINGLES
- ASBESTOS SIDINGS
- ASPHALT SHINGLES
- MINERAL WOOL INSULATION
- ASBESTOS PIPE COVERINGS
- WATERPROOF SHEATHINGS
- NEWTILE
- NEWMARBLE

Merchandise Mart Building, Chicago, Ill. Protected with 225,000 square feet RU-BER-OID Built-up Roofing.

U. S. Post Office Building, Denver, Colorado. Protected with 8,500 square feet RU-BER-OID Built-up Roofing.



Cleveland Stadium, Cleveland, Ohio. Protected with 220,000 square feet RU-BER-OID Built-up Roofing.

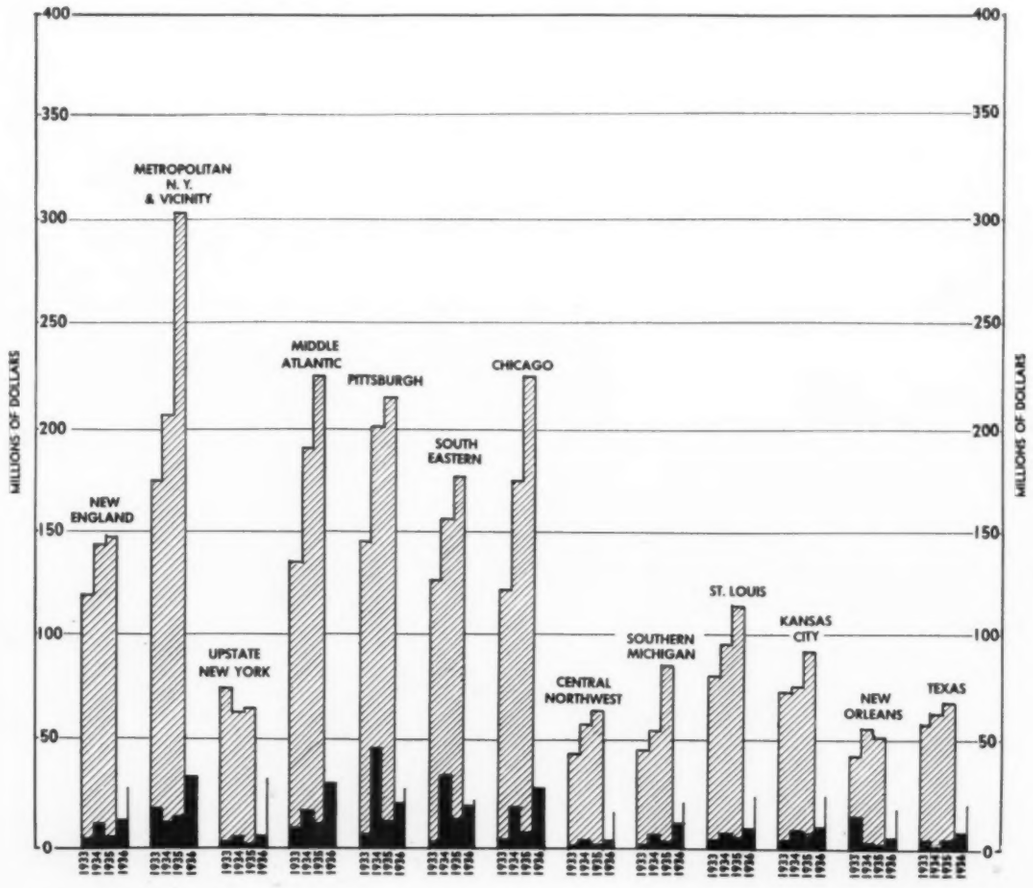
Southern Kraft Corporation Mill, Mobile, Ala. Protected with 264,000 square feet RU-BER-OID Built-up Roofing.

Benjamin Franklin High School, Rochester, N.Y. Protected with 140,000 square feet RU-BER-OID Built-up Roofing.

For February the construction contract volume for the 37 eastern states suffered a substantial decline from the total for January, but this was in part due to the severe weather that gripped most of the nation. The February total, though not complete at the time of writing, was at least 80 per cent greater than was reported for February 1935. Gains over February of last year were recorded for each major district and in each major branch of construction without important exception.

CONTRACTS AWARDED BY TERRITORIES. VALUATION

TERRITORY	RESIDENTIAL BUILDING		NON-RESIDENTIAL BUILDING		PUBLIC WORKS		PUBLIC UTILITIES		TOTAL CONSTRUCTION	
	Jan. 1936	*Jan. 1935*	*Jan. 1936*	*Jan. 1935*	*Jan. 1936*	*Jan. 1935*	*Jan. 1936*	*Jan. 1935*	*Jan. 1936*	*Jan. 1935*
New England	$2,239,600	$1,247,300	$7,061,200	$3,859,300	$2,785,300	$1,128,000	$1,497,800	$ 384,000	$13,583,900	$6,618,600
Metro. N. Y.	9,141,000	6,122,300	9,978,300	3,481,900	9,961,400	3,234,200	4,672,600	2,905,000	33,753,300	15,743,400
Upstate N. Y.	456,700	150,700	2,402,200	626,900	2,303,600	821,900	12,800	122,300	5,175,300	1,721,800
Middle Atlantic	6,312,600	2,426,900	15,813,900	3,727,700	5,808,300	3,517,900	2,992,400	1,499,000	30,927,200	11,171,500
Pittsburgh	4,304,500	2,082,400	10,694,200	6,283,600	3,527,300	4,047,000	2,836,500	289,200	21,362,500	12,702,200
Southeastern	3,466,200	5,141,800	9,185,500	4,087,100	5,235,700	3,540,700	2,370,700	341,700	20,258,100	13,111,300
Chicago	2,967,400	779,900	13,218,300	2,496,700	11,062,100	3,907,400	843,100	1,244,800	28,090,900	8,428,800
Central Northwest	486,700	96,800	2,341,100	376,700	1,782,700	1,345,300	278,700	162,400	4,889,200	1,981,200
Southern Michigan	1,625,400	833,200	7,208,600	1,053,300	2,434,600	1,845,200	816,200	58,300	12,084,800	3,790,000
St. Louis	1,685,500	1,210,200	3,199,900	1,518,200	4,914,100	3,248,700	757,900	496,300	10,557,400	6,473,400
Kansas City	1,762,300	512,100	3,336,900	2,246,200	4,993,800	5,788,100	620,800	441,000	10,713,800	8,987,400
New Orleans	531,900	360,000	1,254,100	1,088,500	4,027,300	1,681,700	204,100	137,500	6,017,400	3,267,700
Texas	2,459,700	1,446,600	4,785,600	2,112,300	111,500	1,592,400	22,200	625,300	7,379,000	5,776,600
37 Eastern States	37,439,500	22,410,200	90,479,800	32,958,400	58,947,700	35,698,500	17,925,800	8,706,800	204,792,800	99,773,900



CONTRACTS FOR CONSTRUCTION, ALL CLASSES, BY GEOGRAPHIC TERRITORIES. BARS DENOTE ANNUAL TOTALS. BLACK PORTIONS SHOW JANUARY TOTALS ONLY.

From the above chart it is seen that January 1936 construction totals for each district exceeded their respective amounts for January 1935. Most showed larger totals than for any other January charted.

Bridgeport
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ARCO WROUGHT COPPER
FITTINGS
NOW you can specify Bridgeport Arco Fittings for your copper water tube installations. These fittings, known everywhere for their accurate, snug fit, perfect copper-to-copper joints and lasting satisfaction, are available in connection with Bridgeport Copper Water Tube from your contractor's regular source of supply.
You are assured, not only of the highest quality fittings, but of complete service and quick deliveries on the entire enlarged Bridgeport line.
A comparatively few Bridgeport Arco Fittings make possible hundreds of combinations, taking care of every ordinary requirement.
By specifying them with Bridgeport Copper Water Tube, you assure your clients of rust-proof, free-flowing lines, at a cost comparable with rustable piping. Ideal for hot and cold water, heating lines, refrigeration, air-conditioning, oil burner and sprinkler installations, etc.
Bridgeport Copper Water Tube, wrought copper fittings, the famous Plumrite Brass Pipe and Bridgeport Plumbers' Brass Goods are sold by recognized jobbers of plumbing and heating equipment everywhere. Why not take advantage of the complete Bridgeport Service? Bridgeport Brass Company, Bridgeport, Conn., Estab. 1865.
ARCO
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BRIDGEPORT

MARKETING NEWS OF THE BUILDING INDUSTRY

JOHNS-MANVILLE to sell materials as a "package"

Coordinated selling is provided in the new Johns-Manville Housing Guild System. These guilds will be set up as local units throughout the country to co-ordinate activities of the dealer, contractor, architect, realtor, finance factor, and manufacturer.

J-M officials hold the theory that the public is not interested in individual building products but wishes to see these products in relation to the home itself, that is, as a "packaged" system of building parts. The new sales plan is built therefore around the construction of "Triple Insulated" model homes in different parts of the country. Each such home will be built and owned by a local builder. It will be designed and planned by a local architect.

The first Triple Insulated house was constructed last autumn in New Rochelle, N. Y. The roof and outside walls are made of *J-M Asbestos Shingles;* hollow walls are filled with *J-M Rock Wool Home Insulation*, a 4" blanket of which also covers the attic floor and completely envelops the occupied portions of the house; finally, the plaster walls and ceilings have been reinforced with *J-M Steeltex*. Hence the name—"the house is (1) fortified against hot and cold weather, (2) protected against fire, (3) armored against time and deterioration."

The J-M Housing Guild System is intended to co-ordinate all marketing processes—production, transportation, warehousing, design, estimating, sales promotion and advertising, selling, construction, financing and delivery ready-for-use by the customer. Local dealer outlets act as headquarters for local retailing.

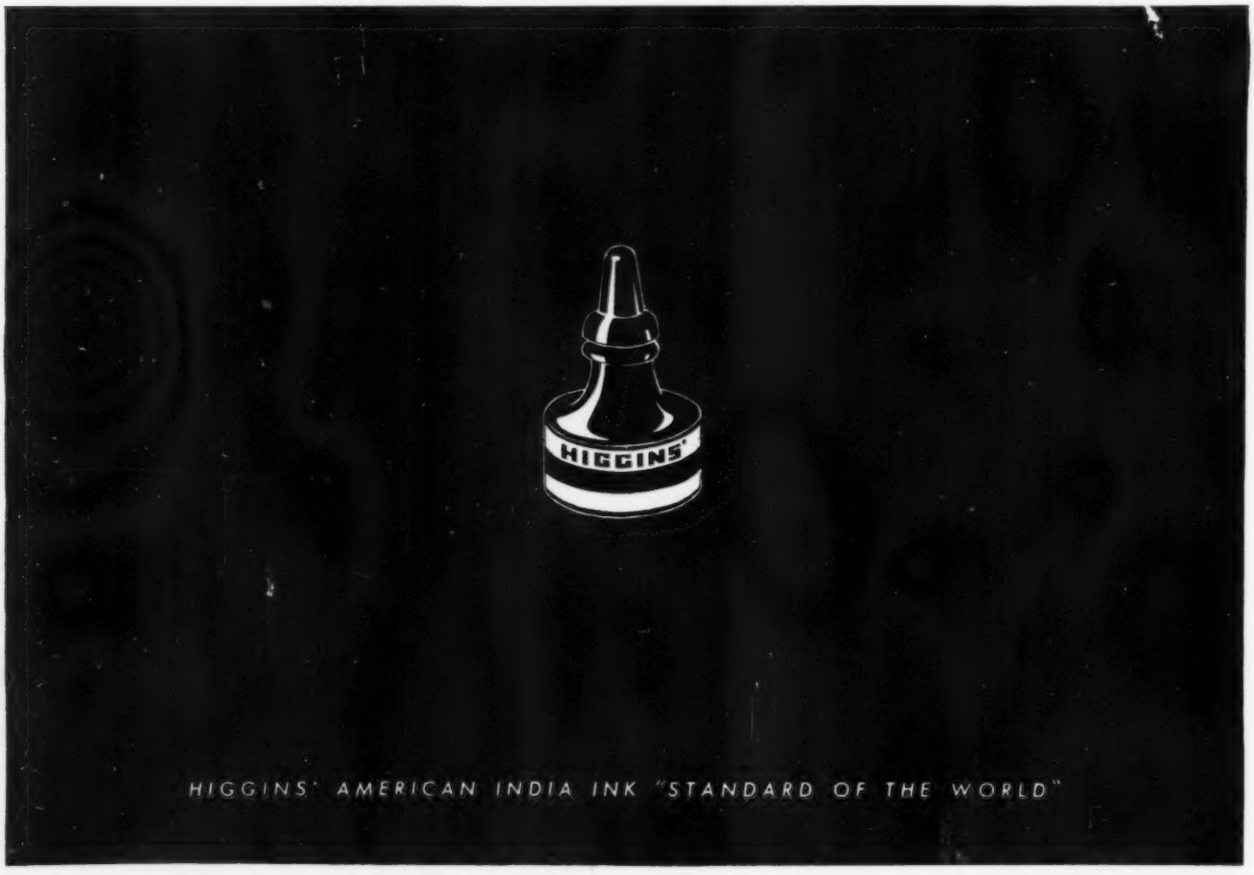
The first step toward such a merchandising plan was made in 1926 when the company began expanding its potential of materials in a house. It was then 2%; today the total reaches 28%.

G-E HOUSING DEPARTMENT to push "New American"

Writing in the January issue of *On the Top* (news magazine of the Appliance and Merchandise Department of General Electric), Carl Snyder, president of Houses, Inc., and manager of General Electric Home Bureau, announces that a central clearing house is to be established for rendering a coordinated architectural and design service to prospective customers:

"Under the General Electric Housing Department will come Houses, Inc., which will be occupied with constant research in all matters relating to the broad subject of home construction, as well as the future design of our own products. Also, the direction of the New American house program, which is to go forward

(Continued on page 26)



Overwhelming preference proved by recent survey

• People who really know paint know that for durability and beauty, pure white-lead and oil cannot be surpassed. Among architects, for example, it is the overwhelming choice... proved again by a recent survey made by the Forest Products-Better Paint Campaign.

Architects in all parts of the country were asked what paint they generally specified for exterior wood surfaces. When the returns were compiled the vote was 3 to 1 in favor of pure white-lead. The reason for this preference is white-lead's proved record of performance ... its traditional ability to stand up for long periods under the most severe weather conditions.

White-lead paint does not crack and scale. On the contrary, it wears down stubbornly by gradual chalking, which leaves a smooth, unbroken surface, an ideal foundation for new paint. Moreover, it can be mixed to suit the requirements of the job and tinted to the exact colors specified.

Dutch Boy White-Lead—good paint's other name — has long been known and respected for its high quality both by property owners and those who deal with paint professionally.

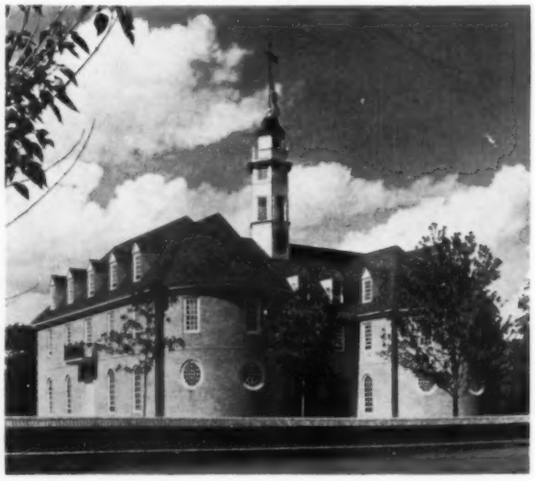
DUTCH BOY WHITE-LEAD *Good Paint's Other Name*

NATIONAL LEAD COMPANY

111 Broadway, New York; 116 Oak Street, Buffalo; 900 West 18th Street, Chicago; 659 Freeman Avenue, Cincinnati; 820 West Superior Avenue, Cleveland; 722 Chestnut Street, St. Louis; 2240 24th Street, San Francisco; National-Boston Lead Company, 800 Albany Street, Boston; National Lead & Oil Company of Pennsylvania, 316 Fourth Ave., Pittsburgh; John T. Lewis & Bros. Co., Widener Building, Philadelphia.

THE RESTORATION OF COLONIAL WILLIAMSBURG

A Reprint of the December, 1935, Issue of THE ARCHITECTURAL RECORD. *104 pages, bound in cloth.* $1.00 *per copy.*



The demand for the December number of THE ARCHITECTURAL RECORD—devoted to the Restoration of Colonial Williamsburg—has been so great that it has been impossible to fill many of the orders received for the issue.

To meet this demand the material has been reprinted in a more substantial and lasting form with a sewed binding and cloth covers. While this style of binding adds to the cost, it is believed that those interested will prefer to have the story of the Williamsburg Restoration in this permanent book form.

Copies of the reprints are now available at $1.00 a copy postpaid. Use coupon below.

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A.R. 3-36

NEWS of the BUILDING INDUSTRY

with certain changes of policy. . . .

"We are going to take into consideration the fact that the house which might be tremendously exciting in a New England town could be an incongruous eyesore in a New Mexican city; that a gem of architecture in California could be a hideous excrescence in a Jersey village. The United States divides itself into seven architectural areas. We propose to see to it that the New American house, or houses, erected in each area is passed upon by the A.I.A. Chapter in that particular locality, in reference to its congruity, its fitness for acceptance from the standpoint of local building style, custom and tradition."

LUMBER INDUSTRY to compete with fabricated materials

The fabricated factory-built house appears to be a potential industrial development which may threaten the lumber industry by opening a way for other building materials, states Richard G. Kimball, technical service director, National Lumber Manufacturers Association:

"The trend has not been ignored; in fact, the lumber industry has been prefabricating for years, as seen in window sashes, doors and other equipment for the home.

"Panels can be fabricated in the lumber yard. They can be used for structures of varying functions, from mess halls to barracks, offices, garages, machine shops, implement storage buildings, cottages and summer cabins. That such a market can be serviced by the lumber manufacturer has been demonstrated by the prefabricated structures provided for the CCC, more than 7,000 buildings in all.

"The retail lumber dealers can just as easily sell boards assembled in parts as they can sell boards separately. There may be instinctive opposition to the marketing of products further refined than is the custom today. Manufacturers are studying this matter, not because they are enamored with the idea of a standardized house producable with the speed of automobile manufacture but because they must be in a position to compete with housing of other materials."

RUBEROID figures huge loss in homes

The loss of close to $7,800,000,000 in equities is faced by some 16,250,000 home owners because of deterioration in their properties over the past six years, according to an analysis of the immediate prospects for residential building by Herbert Abraham, president, The Ruberoid Company (asphalt and asbestos roofing and building products). The estimate is calculated on a life span of 75 years for the average house.

BRIGGS PLUMBING operates three shifts

Manufacturing operations have been stepped up by Briggs Manufacturing Co., Detroit. One giant press, reported to be the world's largest, has a capacity for forming 53 bath tubs an hour.

(Continued on page 29)

NEWS of the BUILDING INDUSTRY

CHASE markets new line of lighting fixtures

Lanterns, brackets and ceiling lights, also closet lights, are being offered by Chase Brass & Copper Co., Inc., Waterbury, Conn., under the trade mark "Even-Glow."

GENERAL MOTORS expands scope in air conditioning

A new company has been organized for the marketing of year-round air conditioning and automatic heating products, according to an announcement by Alfred P. Sloan, Jr., president, General Motors Corp. It will be known as Delco-Frigidaire Conditioning Corporation. General headquarters will be in Dayton, O.; sales headquarters for all eastern states will be located in New York City.

AIR CONDITIONING defined for advertising use

So much misuse of the term "air conditioning" has occurred in the advertising and selling of products that the National Better Business Bureau, in the interest of the consuming public, has issued information for the guidance of both consumer and advertiser.

Agreement is general among the manufacturing industry, architects and heating and ventilating engineers that "air conditioning," generally speaking, is the scientific preparation and simultaneous control of the atmosphere within a structure. The atmosphere is affected by such factors as temperature, humidity, motion, distribution, dust, bacteria, toxic gases and ionization. The three factors which probably affect human comfort to the greatest degree are temperature, humidity and motion of the air. It is the simultaneous control of these three factors which scientific authorities agree constitutes the minimum requirements for air conditioning.

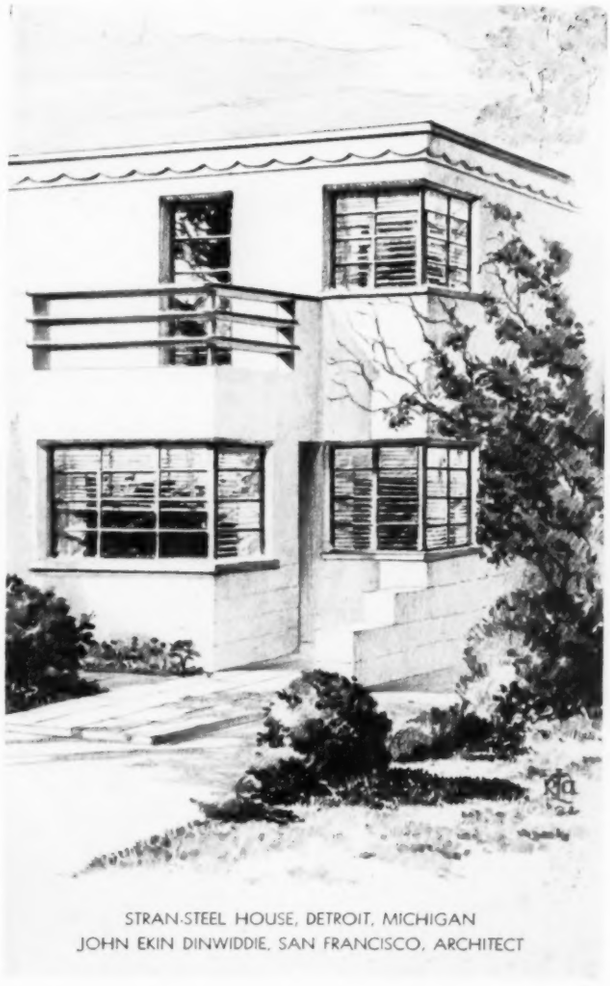
Summer air conditioning should perform, as a minimum, the following functions: (1) cool the air, (2) dehumidify the air, (3) circulate the air.

Winter air conditioning should perform, as a minimum, the following functions: (1) heat the air, (2) humidify the air, (3) circulate the air.

Year-round air conditioning should perform, as a minimum, the following functions: (1) cool and dehumidify the air in summer, (2) heat and humidify the air in winter, (3) circulate the air.

NATIONAL KITCHEN MODERNIZING BUREAU

George E. Whitwell, national chairman, announces that active operation of the Bureau is effective with the distribution of 20,000 copies of the Bureau Plan Book which is just off the press. The Bureau is sponsored by Edison Electric Institute and National Electrical Manufacturers Association. Officers are now functioning within Edison Electric Institute. It is expected that the local Electric Kitchen Bureaus, or other local means of carrying on the Bureau objectives, will develop rapidly all over the country.



STRAN-STEEL HOUSE, DETROIT, MICHIGAN
JOHN EKIN DINWIDDIE, SAN FRANCISCO, ARCHITECT

For their corner windows in Modern houses, many architects are using Fenestra Steel Casements joined by corner mullions. Vertical muntins are omitted, for horizontal effects . . . The complete Fenestra Window includes the Fenestra Bronze-Mesh Screen, and the new Fenestra Air Conditioning Window. Either of these units is easily and quickly attached to the Casement, on the inside, according to the season. Either permits complete operation of Casement (opening, closing and locking of swing leaves) without touching the inner unit. Fenestra also offers a Steel Casing, a product of special appeal to those interested in economical installation. Write for literature. Detroit Steel Products Co., 2256 East Grand Boulevard, Detroit, Michigan.

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